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V
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Masterpieces of

VICTORIAN PHOTOGRAPHY

Arts Council

1951

MASTERPIECES OF VICTORIAN PHOTOGRAPHY

FROM THE GERNSHEIM COLLECTION

A selection of one hundred photographs from the exhibition, held at the Victoria and Albert Museum, has been made into a touring exhibition. Whilst it has not been possible to include many of the exhibits shown in London owing to their fragile nature, and in order to keep the exhibition to a practical size for transport, nearly all the outstanding photographers are represented, and as comprehensive a survey of the subject is shown here, as was in London.

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MASTERPIECES

OF

VICTORIAN PHOTOGRAPHY

1840-1900

FROM THE GERNSHEIM COLLECTION

PUBLISHED BY

THE ARTS COUNCIL OF GREAT BRITAIN

ON THE OCCASION OF

THE FESTIVAL OF BRITAIN

1951

JULIA MARGARET CAMERON: Florence Fisher, 1872. No. 167

FOREWORD

During the Festival of Britain we commemorate the centenary of the first important exhibition of photography ever held, which formed part of the Great Exhibition. The 1851 Exhibition gave great impetus to the new art, for amateurs in all parts of England were brought into contact with work of other photographers, and this exchange of ideas and practical methods, coinciding as it did with an epoch-making invention in photography — the collodion process — exerted considerable influence on British photography in the years to follow.

The present exhibition — the largest retrospective exhibition of Victorian photography ever staged — affords an unparalleled opportunity to look back on the astonishing achievements of nineteenth-century British photographers, some of whom have already come into prominence in the last decade through a growing interest in the subject.

In the Great Exhibition, photography was classed under philosophical (scientific) instruments, and its achievements as an independent art have ever since been overshadowed by the scientific aspect, and by the thousandfold applications of photography to science and industry. Mr. Gernsheim was the first to build up a really comprehensive photographic collection from the aesthetic point of view, including a remarkable number of books on the history of photography and a representative group of apparatus. It is fitting, therefore, that he should have been entrusted with the task of arranging this exhibition from his fine collection, and of writing the authoritative catalogue in which he has been assisted by his wife.

The main emphasis of an Arts Council exhibition is naturally on the aesthetic side, yet it seemed desirable in this centenary exhibition to devote some space to the historical and scientific background of Victorian photography. For whilst it is a well-known fact that Fox Talbot's invention laid the foundation of photography as we know it today, many visitors will learn with surprise and pleasure that right through the Victorian era, most of the epoch-making discoveries in photography were introduced by British inventors, and British photographers at one time held an international reputation in this field.

The visitor will welcome the opportunity to see the originals of many famous masterpieces with which he is familiar from reproductions. Yet by far the larger number of exhibits are hitherto unknown masterpieces by famous photographers, and there are also many delightful examples by recently discovered or little known photographers such as Samuel Bourne, Lewis Carroll, Robert MacPherson, A. G. Dew Smith, and John Shaw Smith.

Thanks to the generous hospitality of the Director of the Victoria and Albert Museum the exhibition is admirably and fittingly housed in close proximity to the Museum's display arranged to celebrate the great 1851 Exhibition, and will be shown from the 1st May to the 11th October 1951. The presentation of the exhibition has been charmingly designed by Audrey Rutherford, Sheila Stratton and Marion Dufton, students of the Royal College of Art.

PHILIP JAMES

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NOTE TO THE READER

The information about photographers and processes has been gathered together in the course of six years' research in countless contemporary books, journals and articles; much of it is here published for the first time. An exhaustive study of British photography in the nineteenth century is in preparation and the reader is referred to this History for details and bibliography. In the few cases where a monograph has been published on a particular photographer's work, it is mentioned in the text.

The exhibits are only a selection from a total of over 5,000 photographs, besides a large collection of books, apparatus, and associated items, which it is hoped may one day form the nucleus of a National Museum of Photography.

Unless otherwise stated, the photographs shown are originals. Only in a few cases where they are contained in albums or in books published in limited editions, from which it was obviously impossible to remove the pages, modern reproductions are shown, sometimes on an enlarged scale. The first dimension given refers to the width of the photograph.

Helmut Gernsheim

Named after its French inventor, Louis Jacques Mandé Daguerre, the process was given 'free to the world' on 19th August 1839—but had been patented in England, Wales and the colonies five days earlier. This sly action caused considerable ill feeling in Britain against the inventor and later against Richard Beard (q.v.), who bought the patent on 23rd June 1841.

A silvered copper plate was exposed to the fumes of iodine, thus forming upon its surface a light-sensitive layer of silver iodide. After exposure in the camera the latent image was developed by the vapour of mercury, fixed with a solution of sodium hyposulphite, washed, and dried.

Although it was possible right from the beginning to take landscapes, architecture, and still-life, portraiture — the great *desideratum*—required too long an exposure (20 minutes) to be practicable. It was not until March 1841 that improvements had speeded up the operation to such an extent that it was possible to open the first portrait studio in Great Britain. The average time of exposure had then been reduced to between 30 seconds and 1¼ minutes.

When daguerreotype portraits were first taken the public, used to miniatures, deplored their lack of colour, and as people came to the sittings in their grandest clothes they also felt that their jewellery should be given due prominence. This need was filled by Richard Beard, who patented the colouring of daguerreotypes in 1842, and henceforth the leading daguerreotypists collaborated with miniature painters, now thrown out of business. Indeed, photographers were themselves quite often former miniature painters. However, many people of taste rightly felt that colouring rather diminished the pure photographic quality of the picture, and tinting by no means became the general rule.

The daguerreotype gave wonderfully fine detail, but suffered from several disadvantages. (a) The picture was laterally reversed, unless taken through a reversing prism—a further improvement introduced in 1845 by Antoine Claudet (q.v.), which, however, trebled the exposure time and so was not generally adopted. (b) Being on solid metal, the picture could not be used as a negative for the production of copies; it was a unique direct positive. (c) Owing to the mirror-like surface of the plate, the picture has to be viewed at a certain angle.

Daguerreotypes are usually of small dimensions, like the miniatures they displaced, and contained in charming little morocco leather cases, or miniature-frames.

In Great Britain the daguerreotype did not long survive the introduction of the wet collodion process in 1851. The patent was therefore not renewed at the end of its term, in August 1853. A few daguerreotypists continued to make pictures until about 1857.

RICHARD BEARD

Beard's name is intimately linked with the practical introduction and early progress of the daguerreotype. Originally a coal merchant at Blackfriars, London, photography was to him merely a speculation, a means of making money. In June 1840 Beard patented an American camera which was a great improvement upon Daguerre's, and at once employed a chemist to find a means of accelerating the process to make it applicable to portraiture. Having succeeded, in March 1841 Beard opened the first photographic portrait studio in Great Britain, at the Royal Polytechnic Institution, London. In June of the same year he became sole patentee of the daguerreotype in England, Wales and the colonies. Business proved immensely successful, and further studios were soon opened by Beard in London and the provinces. But Beard's quickly gained fortune was lost in several protracted law-suits in connection with his patent rights, and he was declared bankrupt in June 1850, three years before the patent ran out. He then concentrated on making daguerreotypes to be copied as steel engravings for illustrated books such as John Tallis's *History and Description of the Crystal Palace, 1851* and Henry Mayhew's important social survey *London Labour and the London Poor*, 1851.

1. A LADY. Dated 1842. 1½″×2″.
   In a gilt metal frame bearing Beard's name, and on the reverse side the royal coat-of-arms and the name of the frame-maker 'T. Wharton, 24 August 1841'. This is the earliest daguerreotype portrait known to exist in Great Britain.
2. BACK OF A DAGUERREOTYPE FRAME. c. 1842.
   As described in No. 1.
3. A GENTLEMAN. c. 1845. 1⅝″×2¼″.
   In richly ornamented gilt frame.
4. A GENTLEMAN HOLDING A TOP HAT. c. 1845. 2¼″×3″.
5. A GENTLEMAN. Dated October 1845. 1¼″×2″.
   In a black miniature-frame with Beard's label on the back giving the addresses of his various studios.

6. A GENTLEMAN. Dated October 1849. 2¼″×3¼″. Tinted.
Case embossed 'Photographic Portrait Gallery, Exchange Arcade, Manchester'. This was another establishment, opened by Beard in November 1842, but not carried on in his name.

ANTOINE JEAN FRANCOIS CLAUDET, F.R.S. 1797–1867

Born at Lyon, France; settled in London in 1827 as an importer of sheet glass and glass domes.

In 1839 Claudet became interested in photography and learned Daguerre's process from the inventor himself, privately purchasing from him the right to use it in England (a deal which a couple of years later was to bring about the first law-suit in the history of photography — between Beard and Claudet) and the monopoly to import French daguerreotypes and Daguerre's apparatus for sale. Claudet opened the second photographic studio in Great Britain, on the roof of the Royal Adelaide Gallery, London, in June 1841, after having independently discovered and communicated to the Royal Society a means of accelerating the daguerreotype process. From that time until his death in London in 1867 Claudet was constantly striving to invent new, and improve old, photographic apparatus and processes. He proved himself not only an artist with the camera, and the leading daguerreotypist in Great Britain (continuing to work the process longer than anyone else in this country), but also deserves the designation of being one of the most eminent photographic scientists of the age, communicating numerous papers to English and French scientific institutions and photographic journals.

7. A GENTLEMAN. c. 1843. 2″×2½″.

8. A LADY. c. 1850. 2″×2½″.
Tinted, and jewellery touched up with gold.

WILLIAM EDWARD KILBURN

Well-known portrait photographer in the daguerreotype and *carte-de-visite* period, with a studio in Regent Street, London.

9. A GENTLEMAN. c. 1852. 2½″×3½″.
Touches of gilt.

10. AN OFFICER. Dated 1853 on the back. 2½″×3½″.
Tinted.

10a. A LADY. c. 1851. 2½″×3½″.
Tinted.

R. LOWE

A daguerreotypist with a studio in The Promenade, Cheltenham.

11. A LADY. c. 1845. 2″×2½″.
Tinted.

JOHN EDWIN MAYALL, 1810–1901

A daguerreotypist in Philadelphia, U.S.A., from 1842 to 1846, Mayall opened a portrait studio in the Strand, London, early in 1847. At the Great Exhibition in 1851 he exhibited several composition daguerreotypes, including a 'Bacchus and Ariadne' measuring 24″×15″ which brought him into prominence, for not only was the 'Bacchus' a great technical feat — the largest daguerreotype ever produced at that time — but he was the first to try to make photography High Art. Fortunately for photography, Mayall did not pursue this line for long, in spite of the Prince Consort's great encouragement. He was too busy making money out of portraiture; he was always trying out new processes and improvements, a typical American in this respect. He introduced into England the albumen-on-glass process in 1851, and was quick to realise the potentialities of the *carte-de-visite* portrait invented by Disderi of Paris. Indeed, it was the portraits he made of the Royal family in this novel size in May 1860 which started the craze for the *carte-de-visite* in England, and made Mayall the leading professional photographer in Britain — and incidentally the richest, making £12,000 a year.

In 1866 Mayall left the management of his Regent Street studio to his sons and opened a new portrait establishment in the most elegant quarter of Brighton, of which town he was elected mayor in 1877.

12. A GENTLEMAN. c. 1850. 2½″×2½″.
Tinted.

13. A GENTLEMAN. c. 1850. 2½″×3½″.
Tinted.

13a. TWO LADIES. c. 1849. 2½″×2½″.

WILLIAM TELFER

An early daguerreotypist in Regent Street, London, Telfer abandoned photography when the daguerreotype was superseded by the collodion process.

14. A LADY IN BONNET. c. 1848. 1½″×2½″.
Coloured.

15. A LADY. c. 1848. 1½″×2½″.
Coloured, with touches of gilt.

ANONYMOUS

16. A LADY. c. 1843. 2½″×3½″.

17. A GENTLEMAN, BELIEVED TO BE HENRY BESSEMER. c. 1845. 3″×3½″.

18. A LADY AND GENTLEMAN. c. 1845. Each 2½″×2½″.
Two portraits mounted in one case. The gentleman holds *Bells Life and Sport* (the lettering is reversed)

19. A GENTLEMAN. c. 1845. 3½″×4½″.

20. TWO GENTLEMEN AND A LADY. c. 1846. 5½″×4½″.

21. A LADY. c. 1847. 2½″×3½″

22. COLONEL WILLIAM BLAKE. c. 1848. 2½″×2½″.
Tinted.

23. A GENTLEMAN. Dated Gateshead, 1853. 2½″×2½″.

STEREOSCOPIC DAGUERREOTYPES

ANTOINE CLAUDET, F.R.S.

24. FOLDING POCKET STEREOSCOPE WITH STEREOSCOPIC DAGUERREOTYPE OF INTERIOR OF THE GREAT EXHIBITION, 1851.
This type of stereoscope was patented by Claudet in March 1853.

25. THE GEOGRAPHY LESSON. c. 1850.

26. MRS. GLANVILLE AND HER DAUGHTER HARRIET SPENCER. Dated June 1857.
Coloured. With original leather case embossed with Claudet's name.

WILLIAM EDWARD KILBURN

27. FOLDING POCKET STEREOSCOPE WITH STEREOSCOPIC DAGUERREOTYPE OF A LADY AND GENTLEMAN. c.1853.
This type of stereoscope was registered by Kilburn on 12th January 1853.

ANONYMOUS

28. A LADY IN LOW DECOLLETAGE HOLDING A BOUQUET. c. 1851.
Coloured. Tiara and necklace incised.

THE CALOTYPE

Contemporaneous with the daguerreotype was the calotype (from the Greek *kalos*—beautiful) or Talbotype process, so named after its English inventor, William Henry Fox Talbot. It was an improvement upon his first paper process called 'Photogenic Drawing', made public 6½ months prior to the daguerreotype. Talbot patented the calotype on 8th February 1841. It is the first negative/positive process, the principle on which modern photography is based.

A sheet of paper was sensitized by coating it successively with solutions of nitrate of silver and iodide of potassium. After exposure, the latent image was developed by the application of gallo-nitrate of silver, and then fixed in a solution of sodium hyposulphite, washed, and dried. This gave a negative from which any number of positive prints could be made. To facilitate the process of making prints and to minimise the effect of the grain of the paper, the negative was sometimes made more transparent by waxing it. In the so-called 'wax paper process' the negative was taken on thin paper which had already been saturated with white wax. Whilst the wax paper process gave very fine detail, the calotype is characterised by broad effects of light and shade, owing to the grain of the paper. Positive pictures by both methods are usually reddish or purplish brown in colour.

The process was very cheap and simple, and pictures as large as 12″×16″ are not uncommon. The average time of exposure was 3 to 5 minutes.

Like the daguerreotype, the calotype was completely eclipsed by the collodion process by the late 'fifties. An attempt by Fox Talbot in 1854 to extend the calotype patent to include collodion failed and his patent lapsed in February 1855.

PHILIP HENRY DELAMOTTE, 1820–1889
(See also under Glass Plate Processes)

Delamotte took up the calotype process in the late 1840's. An artist with the pencil as well as with the camera, he was appointed professor of drawing at King's College, London, in 1856. He published two photographic manuals, and illustrated a large number of books with his photographs and sketches.

29. INTERIOR OF THE CRYSTAL PALACE, HYDE PARK. April 1852. 15¾″×12″.
Waxed paper negative.

30. LANDSCAPE. c. 1851. 16″×12″.
Waxed paper negative.

NICHOLAAS HENNEMAN

A Dutchman by birth, Henneman was Fox Talbot's valet and later his collaborator in his photographic experiments. Henneman was put in charge of Talbot's photographic business establishment at Reading in 1843, and in 1847 in charge of a portrait studio which Talbot opened in Henneman's name in Regent Street, London. In 1851 he bought from Talbot the interest in the studio. In the autumn of that year Henneman, in collaboration with a French photographer, A. Ferrier, took photographs of the Great Exhibition building and objects (see No. 421). It does not appear to have been a profitable job for Henneman, for Fox Talbot wrote in October 'Henneman is hard at work making photographs of the building for the Royal Commissioners and Executive Committee, but they are so extraordinarily stingy notwithstanding they have a surplus of £200,000, and make such hard conditions with him, that it is doubtful whether he will earn anything by his labour.'

Though Henneman adapted himself to the collodion process, the Regent Street business did not pay well in the mid-fifties and was closed about 1856. Later, Henneman became operator in Oliver Sarony's establishment in Scarborough.

31. TWO SISTERS. c. 1847. 1¾″×2¼″.
In a dark blue morocco leather case similar to those used for daguerreotypes.

DAVID OCTAVIUS HILL, 1802–1870 AND ROBERT ADAMSON, 1821–1848

David Octavius Hill, a native of Perth, Scotland, was a landscape painter. Wishing to commemorate the disruption of the Church of Scotland in 1843 by a huge

canvas which was to include portraits of 474 ministers and prominent lay members who were present at the signing of the Deed of Demission (see No. 68), Hill turned to photography to enable him to obtain likenesses as guides for his painting. In this photographic work he was assisted by Robert Adamson, a chemist. Their fame as photographers rapidly spread and they soon found themselves pressed to photograph all the notabilities of Scotland. They used the calotype process (which was not patented in Scotland), and in order to arrive at reasonably short exposures, the sitters were posed in sunlight in front of Hill's house, with furniture and curtains arranged to convey a convincing impression of an interior.

Hill and Adamson, however, did not limit themselves to portraying Scottish society, but took their camera to nearby seaside villages. The simple fisherfolk in their picturesque costumes, their fishing boats and old stone cottages, are frequently represented in their work, which also includes architectural views of Edinburgh and St. Andrews. Curiously enough, though Hill was a landscape painter, there are only about two dozen *photographic* landscapes by him.

Hill's and Adamson's photographs are today internationally regarded as the finest ever produced. It is amazing that in the first years of photography the new art should already have reached its highest peak in the achievements of these two artists.

What was the secret of Hill's pre-eminence? It was certainly not technical facility, for with all the limitations of his apparatus, Hill simply gave expression to what was in himself. He had an artistic conception of an unusually high order, a masterly sense of form, and a sure instinct for bold and simple composition. His portraits are powerful in characterization. It is fortunate that Hill chose the calotype as his medium, and not the daguerreotype, for whilst the latter is dependent on minuteness of detail, in the former technique Hill was able to achieve broad effects which suited his pictorial conception.

The Hill/Adamson output of about 1,500 pictures is astonishing, considering that the photographic work came to a sudden end with the death of Robert Adamson in 1848. Hill thereupon returned to painting, but curiously enough, the few paintings which survive excite little interest today. It is his photographic work which has made D. O. Hill's name famous, and this is perhaps the best proof we have that photography can be an art in its own right, if practised by an artist.

(Bibliography: *David Octavius Hill. Master of Photography* by Heinrich Schwarz. London and New York, 1932).

32. ALBUM entitled 100 *Calotype Sketches by D. O. Hill, R.S.A., and R. Adamson. Edinburgh 1845.* 24″×27″.
This is the finest of the few existing albums prepared by Hill himself. It has a painted title page by Hill, with his portrait in the centre. Each photograph bears the names of Hill and Adamson. The album contains the cream of their photographic output — portraits, fisherfolk, architecture and landscapes. It was bought by Clarkson Stanfield, R.A., and contains his signature, address, and the date 1st October 1845 on the fly-leaf. Clarkson Stanfield was a well-known marine and landscape painter, and co-illustrator with Hill of *Scotland Delineated in a Series of Views*, Vol. I, 1847, Vol. II, 1854.
33. D. O. HILL by Robert Adamson. 1843. 6¼″×8¼″.
34. THE REV. DR. ABRAHAM CAPADOSE (1795–1874). 1843. 5¾″×8″.
A Dutch physician and Calvinistic writer.
35. THE REV. DR. THOMAS CHALMERS AND MRS. CHALMERS. 1843. 11¾″×9″.
Dr. Chalmers (1780–1847) was a theologian, and leader of the movement which led to the formation of the Free Church of Scotland in May 1843.
36. MISS CHALMERS AND HER BROTHER. 1843. 8¼″×11″.
Children of Dr. Thomas Chalmers.
37. SIX MINISTERS OF THE FREE CHURCH OF SCOTLAND. 1843. 12″×9½″.
38. JAMES NASMYTH (1808–1890). 1843–45. 6″×7¾″.
Engineer and astronomer; inventor of the steam hammer.
39. DR. GEORGE BELL. 1843–48. 6″×7″.
Doctor of medicine and founder of charity schools in Scotland.
40. A PORTHOLE, EDINBURGH CASTLE. (Gordon Highlanders). 1843–48. 5¼″×7¾″.
41. THE GRIERSON SISTERS. 1843–48. 5¼″×8″.
42. GEORGE MOIR AND JAMES GIBSON. 1844. 5¼″×7¾″.
George Moir (1800–1870). Advocate and author, professor of belles-lettres, Edinburgh.
James Gibson (1799–1871). Professor of theology and ecclesiastical history, Glasgow.
43. SHERIFF MARK NAPIER (1798–1879). 1843–48. 5½″×7½″.
Historical biographer and advocate.
44. THE MARQUESS OF NORTHAMPTON (1790–1851). 1843–48. 5¾″×8″.
President of the Royal Society 1838–49. Took great interest in the new art of photography.
45. SHERIFF THOMAS GORDON AND MRS. GORDON. c. 1845. 11″×8¼″.
46. THE GORDON FAMILY. c. 1845. 11¼″×9″.
47. - FORRESTER. c. 1845. 9¼″×11¾″.
48. FISHERBOYS AT NEWHAVEN, NEAR EDINBURGH. c. 1845. 7¾″×5¾″.
49. NEWHAVEN FISHWIVES. c. 1845. 7¾″×5¾″.
50. THE REV. GEORGE GILFILLAN AND DR. SAMUEL BROWN 1844. 8″×6″.
The Rev. George Gilfillan (1813–1878). Minister and author. Dr. Samuel Brown (1817–1856). Doctor of medicine, chemist, and author.
51. THE MISSES MORRIS AND D. O. HILL. 1843–45. 5¾″×7¾″.
52. JOHN STEVENS AND BUST. 1843–45. 5¼″×8¼″.
Painter.
53. TOMBS IN GREYFRIARS CHURCHYARD, EDINBURGH, WITH HERIOT'S HOSPITAL IN BACKGROUND. 1843–45. 8″×5¾″.
54. SAILORS AT NEWHAVEN, NEAR EDINBURGH. c. 1845. 8″×5¾″.
55. LEITH DOCKS. c. 1845. 5¾″×7¾″.
56. THE REV. THOMAS H. JONES (1796–1860). c. 1845 6¼″×7¾″.

57. COTTAGE WITH OUTSIDE STAIRS, NEWHAVEN. c. 1845. 8″×5¾″.

Nos. 50–57 are reproductions by H. G. from photographs in the Hill/Adamson album (No. 32).

58. MRS. ANNE RIGBY. c. 1844. 6″×8″.
Wife of Dr. Edward Rigby and mother of Miss Elizabeth Rigby.

59. MISS ELIZABETH RIGBY (LADY EASTLAKE) (1809–1893). c. 1844. 6″×8″.
Author. In 1849 she married Sir Charles Eastlake, P.R.S., who a few years later held the positions of President of the Royal Academy, Director of the National Gallery, and first President of the Photographic Society of London.

60. SIR FRANCIS GRANT (1803–1878). 1843–48. 5¼″×8″.
Painter of portraits and sporting-scenes. President of the Royal Academy.

61. WILLIAM ETTY, R.A. (1787–1849). 1843–45. 6″×8″.
Painter of mythological subjects and nudes. His self-portrait in the National Portrait Gallery, London, is copied from Hill's photograph.

62. THE REV. JAMES FAIRBAIRN READING TO FISHWIVES AT NEWHAVEN, NEAR EDINBURGH. c. 1845. 7¼″×5¼″.

Nos. 58–62 are carbon prints made from Hill's negatives by T. & R. Annan & Co., 1879–81.

63. LADY MARY RUTHVEN (1789–1885). c. 1845. 6″×8″.
A friend of Sir Walter Scott, and a leading member of the intellectual society of Edinburgh.

64. JAMES FILLANS AND HIS DAUGHTERS. 1843–48. 6¼″×8¼″.
Scottish sculptor (1808–1852).

65. MISS MCCANDLISH. 1843–48. 6¼″×8¼″.

66. THE FINDLAY CHILDREN. 1843–48. 6¼″×8¼″.

67. 'THE BIRDCAGE'. 1843–48. 6¼″×8¼″.

Nos. 63–67 are photogravures made from Hill's negatives by J. Craig Annan (q.v.), c. 1904.

68. PHOTOGRAPH OF HILL'S PAINTING OF THE SIGNING OF THE DEED OF DEMISSION IN THE TANFIELD HALL, EDINBURGH, 23RD MAY 1843. Carbon print 32″×14″ (not an enlargement, but a contemporary print from the original plate).
When Hill had completed his monumental painting, 11′ 4″×5′, portraying 474 people, on which he spent twenty-three years (1843–66) he asked his friend Thomas Annan (q.v.) to reproduce it. A special camera and lens had to be constructed, for a reproduction nearly three feet long was a size unheard of in those days. Exhibited is one of the original prints made in 1866 by Sir Joseph Wilson Swan, who had invented the carbon process shortly before.
In it, Hill immortalized himself as artist with his sketch-book, whilst Adamson appears with his camera.
Hill's painting now hangs in the Presbytery Hall, the Free Church of Scotland Offices, The Mound, Edinburgh.

DR. THOMAS KEITH, 1827–1895

An Edinburgh surgeon and an amateur photographer whose work — though so far practically unknown — is of outstanding merit both technically and artistically. Unlike his friend D. O. Hill, Dr. Keith concentrated almost exclusively on architecture in Edinburgh, and the surrounding scenery. His photographs, taken between 1853 and 1856, show a modernity of composition that is both astonishing and inspiring in our day.

69. EDINBURGH CASTLE. c. 1855. 10½″×9½″.

70. TOWER OF GREYFRIARS CHURCH, EDINBURGH. c. 1855. 10½″×9½″.

71. OLD HOUSES IN EDINBURGH, WITH ST. GILES' CATHEDRAL IN BACKGROUND. c. 1855. 10½″×9½″.

72. WHITEFRIARS WYND, EDINBURGH. c. 1855. 9½″×10½″

73. HOLYROOD CHAPEL. c. 1855. 10½″×8¼″.

74. GREYFRIARS CHURCHYARD, WITH HERIOT'S HOSPITAL IN BACKGROUND. c. 1855. 10½″×8″.

75. GREYFRIARS CHURCHYARD, WITH EDINBURGH CASTLE IN BACKGROUND. c. 1855. 10½″×8½″.

76. TOMBS IN GREYFRIARS CHURCHYARD. c. 1855. 10½″×9½″.

77. THE MACKENZIE TOMB, GREYFRIARS CHURCHYARD c. 1855. 10″×11″.

78. ST. GILES' CATHEDRAL, EDINBURGH. c. 1855. 10″×11″.

Nos. 77 and 78 are modern contact prints from the original waxed paper negatives.

JOHN LEIGHTON, 1823–1912

A painter of architecture under the pseudonym 'Luke Limner', and an amateur photographer under the pseudonym 'Phoebus'; a founder member of the Photographic Society of London.

79. SELF-PORTRAIT. Dated 1853. 4″×4½″.

JOHN SHAW SMITH, 1811–1873

An amateur photographer living in County Cork, Shaw Smith made a tour of Europe and the Near and Middle East in 1850–52, during which he took about three hundred calotype views. His work, which has hitherto remained completely unknown, is technically and artistically as fine as that of the French calotypist Maxime Du Camp, who photographed many of the same scenes in the Middle East at the same time, and whose views were published in 1852 and consequently attracted great attention. Shaw Smith was not only among the first Europeans to venture to Petra, but he was the first to bring back a photographic record of the 'rose-red city' (see No. 87).

80. A CHURCHYARD WITH SEATED MAN. 1850. 7″×9″.

81. A RUINED IRISH CHURCH. 1850. 9″×7″.
Calotype negative.

82. NOTRE DAME, PARIS, SOUTH TRANSEPT. 1850. 7″×9″.
Calotype negative and positive.

83. TURKISH CEMETERY AT PERA, CONSTANTINOPLE. Dated November 1851. 9″×7″.
Waxed paper negative.

84. A HOUSE IN CAIRO. Dated November 1851. 7″×9″.
Waxed paper negative.

85. RELIEF ON TEMPLE AT THEBES. 1851. 9″×7″.
Waxed paper negative.

86. THE PILLARS OF THE GREAT HALL AT KARNAK. Dated 25th January 1852. 9″×7″.
Waxed paper negative.

87. TOMBS AT PETRA. Dated March 1852. 9″×7″.
Waxed paper negative.

88. A RUINED CAPITAL AT BAALBEK. Dated May 1852. 9″×7″.
Waxed paper negative.

WILLIAM HENRY FOX TALBOT, 1800–1877

Photography as practised today is based on the negative/positive process which Fox Talbot first made known to the world on 31st January 1839. This date is important, for Talbot published his process 6½ months before Daguerre's process was made public.

What led Fox Talbot — a country gentleman of scientific interests, a Fellow of the Royal Society, and for two years a Member of Parliament — to his great discovery? In October 1833 he was sketching on Lake Como, Italy, with the aid of the *camera lucida*, an optical instrument often used by people unskilled in drawing. It occurred to him how much more satisfactory and quicker his task would be if instead of laboriously tracing the image, it were possible to fix it 'without the aid of the artist's pencil'.

On returning to England Talbot started experimenting with the *camera obscura*, making ordinary writing-paper light-sensitive by coating it with solutions of common salt and then silver nitrate, which combined to form silver chloride. At first he was unable to fix his pictures, but in June 1835 discovered the fixing property of common salt and was thus enabled to produce the first permanent photographs. One of these pictures, preserved at the Science Museum, London, is the earliest extant camera photograph in the world.

Though Fox Talbot's interests were mainly scientific — his photographic researches were incidental, so to speak, amongst his multifarious work on mathematics, physics, chemistry, astronomy, botany, archaeology — he produced many beautiful photographs, the direct appeal of which lies in their simplicity and everyday subject matter. Many of them were published in *The Pencil of Nature* (No. 420). With this book, which appeared in 1844, Talbot again made photographic history, for it is the first book illustrated with photographs. He chose his illustrations from a wide range of subjects, in order to demonstrate the scope of photography, and also how much truer to nature photographic book illustrations were than engravings or lithographs, which had hitherto served for this purpose.

Talbot was also the first to demonstrate a method of taking instantaneous photographs by means of an electric spark (1851) and to invent a means of photographic engraving (1852).

89. TWO GENTLEMEN PLAYING CHESS. c. 1843. 2¾″×3¼″.
This hitherto unknown picture is an entirely different composition from that entitled 'The Chess Players'. It was published in the *Art Journal*, June 1846, each copy of which contains a calotype specimen to illustrate an article on Talbot's process. The photograph bears on the *verso* Talbot's usual label 'Patent Talbotype or Sun Pictures'. An enlarged reproduction by H.G. is shown beside the rather faded original.

90. PHOTOGENIC DRAWING OF LACE. c. 1843. Uncut proof print 9″×7¼″.

91. A STREET IN PARIS. 1843. Uncut proof print 7″×6¼″.

92. 'THE OPEN DOOR'. 1844. Uncut proof print 7¾″×5¼″
This picture was also published in *The Pencil of Nature*, Part II, plate VI, February 1845.

93. THE CLOISTERS AT LACOCK ABBEY (Talbot's family seat in Wiltshire). c. 1844. Uncut proof print 8¼″×6¼″.

94. VIEW IN YORK. July 1845. Uncut proof print 8″×6¼″.

ANONYMOUS

95. WILLOW TREES. c. 1850. 8″×8¼″.

96. A DEAD TIGER. c. 1850. 9¼″×7⅞″.

Nos. 95 and 96 are modern contact prints from the original waxed paper negatives.

97. PYRAMID OF CAIUS SESTIUS, ROME. Dated 8th November 1858. 11¼″×10″.
Calotype negative.

GLASS PLATE PROCESSES

The first practical process on glass was published by a Frenchman, Niepce de St. Victor, on 12th June 1848. But since his albumen-on-glass process did not find much favour with English photographers on account of its slowness, which precluded its use for portraiture, and was in any case soon superseded by wet collodion, it must suffice here to mention that it combined the advantages of the daguerreotype — fine detail — with those of the Talbotype — the large size and possibility of multiplication.

The startling invention which was to supplant all existing methods was the wet collodion process introduced by the Englishman, Frederick Scott Archer, in March 1851. It immediately won immense popularity on account of the superior light-sensitivity of the collodion emulsion. Exposures varied from 5 seconds to 2 minutes. Most important of all, it was unshackled by patent restrictions, and the general satisfaction is echoed in the comment of the *Illustrated London News:* "To Mr. Archer the public owe a debt

of gratitude as at last giving them one process for portraits which can be practised without fear of the law.'.

Collodion positives on glass, usually called ambrotypes, are merely a particular adaptation of Archer's process, worked out by him with two other photographers, Fallon Horne and Peter W. Fry, who had been initiated into the use of wet collodion by the inventor. They found that by subjecting an underexposed collodion negative to a bleaching operation, the blackened silver haloid was transformed into white metallic silver and the negative image could be converted into a seemingly positive one when viewed by reflected light against a dark background. When viewed by transmitted light or without a dark background (see No. 117) the picture retains its negative character.

The first publication of this modification of the collodion process appears in the *Art Journal* (London), July 1851, in the form of a communication from Fallon Horne to Robert Hunt.

Archer's generosity in giving his invention free to all the world was poorly repaid. Fox Talbot claimed it — though unsuccessfully — under his calotype patent, and an American, James Cutting, succeeded — one wonders how — in patenting collodion positives on glass in England, in July 1854. He called the process 'Ambrotype' (from the Greek *ambrotos* — imperishable), which name came into general use in England, but he does not appear to have been able to enforce his patent.

Ambrotypes were used almost exclusively for portraiture, and since the materials employed were cheaper and the manipulation simpler than that of the daguerreotype, they soon displaced daguerreotype portraiture. Ambrotypes were exceedingly popular from about 1853 until about 1860, when they in turn were swept aside by the new fashion for the *carte-de-visite*.

Like their forerunners, ambrotypes could not be multiplied. They were made in the same sizes as daguerreotypes and, like them, were often hand-tinted, and fitted in similar cases, and for this reason the two are often confused by the layman. Yet the bright mirror-like surface of the daguerreotype is distinctly different from the dull grey appearance of the ambrotype.

For portraits of larger size, or when several copies were required, an ordinary wet collodion negative was made and any number of copies printed from it on paper.

The cumbersomeness of the collodion process was a great drawback in landscape photography. Since the plates had to be exposed and developed while in a wet state, the photographer had to carry with him a complete chemical chest and darkroom tent in order to prepare, develop and fix the plates on the spot.

From the mid-fifties onwards various substances were introduced which had the effect of preserving the collodion emulsion in a moist state for several days or even weeks, thus allowing most of the chemical manipulations to be performed in the photographer's darkroom at home. But these so-called 'dry collodion' processes had the disadvantage of being considerably slower, requiring exposures of 3 to 10 minutes.

True dry-plate photography, using gelatine emulsion invented in 1871 by another Englishman, Dr. Richard Leach Maddox, only started to come into general use about 1880. Dr. Maddox's invention ushered in the third main period of photography. It not only simplified manipulation enormously, but also greatly speeded up exposures, so that one could now speak of instantaneous photography.

A few years later the first 'hand cameras' appeared on the market — so-called, I assume, not because they could be used without a tripod, but because they did not require a porter or a carriage to transport them! They were soon followed by real hand cameras like the Kodak (1888) with which one hundred exposures could be taken consecutively on a roll-film, and which made snapshooting a pastime for many enthusiasts who were entirely devoid of artistic training and feeling. Photography now underwent another revolution comparable only with that which the introduction of wet collodion wrought in the early 1850's. The ranks of photographers were swelled by a vast increase in the number of amateurs, who were attracted by the much simplified and cleaner darkroom manipulation which was one of the great advantages of manufactured plates and roll-films. The great majority were content to

follow the famous Kodak slogan 'You press the button, we do the rest'. Thus, within fifty years photography had been completely transformed. By the turn of the century it was well in its present phase.

There have been further technical improvements, plates and films have become much faster and much more colour-sensitive, pocket and miniature cameras have reduced the photographer's equipment to the absolute minimum, the technical side of photography is now so simple that we are often told it is child's play, but whether in its second half-century photography as an art has made progress comparable to the extent to which it is practised, is a question which I would unhesitatingly answer in the negative. A hundred years ago, a handful of photographers produced a handful of good pictures: today, there are millions of devotees, but they still only produce a handful of good pictures.

COLLODION POSITIVES ON GLASS (AMBROTYPES)

CORNELIUS JABEZ HUGHES, 1819–1884

As Daguerre's patent did not cover Scotland, Hughes — though a Londoner — opened a daguerreotype studio in Glasgow in 1848. Seven years later he bought Mayall's studio in the Strand when the latter moved to Regent Street. In 1862 he took over a studio in Ryde, Isle of Wight, and became official photographer to Queen Victoria at Osborne. Hughes is the author of a popular manual on the wet collodion process.

98. A LADY. c. 1858. 2¼″×3¼″.
Touches of gilt.

DAVID JOHNSON, BLACKBURN

99. A GENTLEMAN WITH TOP HAT. c. 1853. 2¼″×3¼″.

MANSFIELD & YEATS, DUBLIN

Well-known photographers in Grafton Street, Dublin.

100. A GENTLEMAN. c. 1860. 2¼″×3¼″.

GEORGE RAFT, BRIGHTON

101. A LADY. c. 1856. 2¼″×3″.

SARGOOD & CO.

102. FAMILY GROUP. c. 1856. 2¼″×3¼″.
Label on the back, illustrating Sargood's New Gallery, near Westminster Bridge.

ANONYMOUS

103. TWO SISTERS. c. 1855. 2¼″×2¼″.
104. A LADY. c. 1854. 3¼″×4¼″.
105. A GENTLEMAN. c. 1855. 2¼″×2¼″.
Tinted, with background of clouds.
106. WIFE OF ABOVE. c. 1855. 2¼″×2¼″.
Tinted, and touches of gilt.
107. LADY AND GENTLEMAN. c. 1855. 3¼″×4¼″.
Coloured.
108. MOTHER AND BABY. c. 1856. 2¼″×3¼″.
Touches of colour and gilt.
109. MRS. WILLIAM BLAKE. c. 1856. 2¼″×3¼″.
Coloured.
110. AN OFFICER. c. 1856. 1¼″×2″.
111. A LADY. c. 1857. 2¼″×3¼″.
Tinted.
111a. A LITTLE GIRL. c. 1857. 1″×1½″.
112. A LADY. c. 1857. 1¼″×2″.
Tinted.
113. MOTHER AND DAUGHTER. c. 1857. Each 2¼″×2¼″.
Two photographs in one case.
Relievo ambrotypes — an uncommon variation of the ambrotype process, invented by Thomas C. Lawrence of Greenwich in 1857. The emulsion of the background has been removed and the whole backed by a piece of white paper. The photograph casts a shadow on a thick piece of glass mounted between the photograph and the background, giving a strong relief effect.
114. A LADY. c. 1857. 2¼″×2¼″.
Relievo ambrotype.
115. A GENTLEMAN. c. 1857. 4″×5″.
115a. A GENTLEMAN WITH DOG. c. 1857. 3¼″×4¼″.
116. A LADY. c. 1857. 1¼″×2″.
Tinted.
117. A GENTLEMAN. c. 1857. 2¼″×3¼″.
Taken out of its case and backed half white, half black, in order to demonstrate the positive and negative effect of an ambrotype.
117a. A LADY. c. 1859. 3¼″×4¼″.
Tinted background.
118. A LADY. c. 1859. 2¼″×2¼″.
Coloured background.
A particularly elegant case in the shape of a book.
118a. A LADY. c. 1860. 3¼″×3¼″.
Tinted, with landscape background.
119. A FAMILY. c. 1860. Each 2¼″×2¼″.
Two ambrotypes in one case.
120. AMBROTYPE 'UNION' CASE.
Ambrotype cases were often very ornamental and attractive, especially the so-called 'Union' cases made of papier mache and imported from America
121. ANOTHER 'UNION' CASE.
122. A VERY FINE CASE, INLAID WITH MOTHER-OF-PEARL AND PAINTED. c. 1857. 2¼″×3″.
Beside it is shown its contents: a very rare modification of the collodion positive process — a portrait on leather instead of glass.

JAMES ANDERSON, 1813–1877

Born in Cumberland, Isaac Atkinson, a water-colour artist, settled in Rome in 1838 and assumed the name of James Anderson. He exhibited his pictures with some success, and also did a lively business in statuettes reproduced from antique sculpture. In 1849 he became interested in photography and worked for contemporary sculptors in Rome. His photographs of antique sculpture in the Roman museums, and views of the city, were in great demand by tourists. In later years he added the reproduction of paintings. Anderson's photographs of works of art in Italian museums spread his fame all over the world. The firm he founded still flourishes in Rome under the direction of his grandsons.

123. ARCH OF SEPTIMIUS SEVERUS, ROME. c. 1858. 14¼″×11¼″.

124. BASE OF TRAJAN'S COLUMN, ROME. c. 1858. 11¼″×14¼″.

125. SCULPTURE GALLERY IN THE VATICAN. c. 1858. 14¼″×11″.

J. CRAIG ANNAN, 1864–1946

(see also Nos. 63–67)

Son of Thomas Annan (q.v.), was trained in his father's portrait studio in Glasgow, studied the photogravure process under its inventor Karl Klic in Vienna, and was largely responsible for its introduction into Great Britain. Annan was one of the front-rank photographers in Britain towards the end of the century. A great admirer of Whistler and a close friend of D. Y. Cameron, with whom he toured in many foreign lands, it is perhaps not surprising that Annan's best work is expressed in photogravure and photo-etching. It was due to his untiring efforts to make the work of D. O. Hill and Robert Adamson known all over the world that Hill was 're-discovered' at the beginning of this century. Curiously enough, Annan's own photographic work has been somewhat overshadowed by the magnificent photogravures he made of Hill's and Adamson's photographs (c. 1904).

126. MISS JANET BURNET. Dated 1898. 6¼″×8¼″. Photogravure.

127. FRANCISCAN OF IL REDENTORE. c. 1890. 3¼″×5″. Photo-etching.

THOMAS ANNAN, 1829–1887

(see also No. 68)

Originally trained as a copperplate engraver, Annan took up photography in 1855 and within a few years became the leading portrait photographer in Scotland, with a studio in Glasgow. His portraits are simple and straightforward, and are characterized by a complete absence of the usual studio 'props', and stereotyped poses evident in most professional portraits of the 1860's and '70's. Annan was a friend of D. O. Hill and Sir Joseph Wilson Swan, whose carbon process he introduced into Scotland. The photographic establishment of T. & R. Annan still flourishes in Glasgow and Lennie.

128. DR. DAVID LIVINGSTONE (1813–1873). African explorer and missionary. 1864. Modern copy 12¼″×13¼″ from original negative.

129. Three portraits of professors at Glasgow University
PROFESSOR ALLEN THOMPSON
PROFESSOR HARRY RAINY
PROFESSOR T. T. JACKSON
c.1865. Carbon prints each 6¼″×8¼″, autographed.

H. BARRAUD

A well-known stage and society portrait photographer in London; published four volumes of *Men and Women of the Day* between 1888–91, in which these photographs appeared.

130. CARDINAL NEWMAN (1801–1890). 1887. Woodburytype, 7″×9¼″.

131. MRS GLADSTONE. 1887. Woodburytype, 7″×9¼″. Wife of the statesman William Ewart Gladstone (1809–1898).

132. MARY MOORE. 1888. Woodburytype, 7″×9¼″. Actress.

FRANCIS BEDFORD, 1816–1894

Associated with photography from the early 1850's, Bedford concentrated on English landscape and architecture, and within a short time gained an international reputation as one of the front-rank landscape photographers. For this reason he was commanded by Queen Victoria to accompany the Prince of Wales on his tour of the East in 1862. The following year Bedford published the results of this tour in three portfolios, and some years later in a popular quarto volume. Elected Vice-President of the Photographic Society, 1861.

133. CHRISTCHURCH GATEWAY, CANTERBURY. c. 1856. 6¼″×8¼″.

134. BISHOP AUDLEY'S CHAPEL, HEREFORD CATHEDRAL. c. 1856. 9¼″×11¼″.

135. THE RUINED MOSQUE OF TAYLOON, CAIRO. Dated March 1862. 11¼″×9¼″.

136. GHIZEH. Dated March 1862. 11¼″×9¼″.

137. GATE OF THE SERAGLIO, CONSTANTINOPLE. Dated May 1862. 11″×9¼″.

138. TRIPOLI, EL MEINA. Dated May 1862. 11¼″×8¼″.

SAMUEL BOURNE, 1834–1912

A Nottingham man, Bourne took up photography in the mid-1850's. About 1860 he sought his fortune in India and became a partner in the photographic business of Bourne & Shepherd in Simla and Calcutta (which I understand exists to this day). Bourne was one of the earliest mountain photographers, making expeditions in the Himalayas often lasting several months. An army of sixty coolies carried his apparatus and chemicals, stock of glass plates, and provisions. In 1866 Bourne set up his camera and dark tent on the Manirung Pass and took photographs at an altitude of 18,600

feet — the greatest height at which a photograph had been taken until the present century.

139. THE DHUL CANAL, KASHMIR. 1863. 11½″×9½″.
(This picture won first prize at the Photographic Society of India's exhibition at Bengal, 1864).

140. BARAMULA, FROM THE SOUTH SIDE OF RIVER JHELUM. c. 1863. 11½″×9½″.

141. CASCADE ON THE SCINDE RIVER. c. 1863. 11½″×9½″.

142. COLONNADE OF HINDU PILLARS AT THE KOOTUB NEAR DELHI. c. 1863. 11⅝″×9½″.

J. BRIDSON

An amateur photographer.

143. A PICNIC. c. 1882. 8¼″×6½″.

HENRY HERSCHEL HAY CAMERON

Youngest son of Julia Margaret Cameron (q.v.), Professional portrait photographer in London. His large head studies of celebrities betray unmistakably the influence of his mother's style; technically, they are considerably better.

143a. SIR HENRY IRVING (1838–1905) AS THOMAS BECKET. 1893. 13¾″×16¾″.

Irving's appearance in 1893 in Tennyson's 'Becket' proved one of his greatest personal triumphs. He wrote of this photograph: 'I consider it a remarkable work of photographic art. It is certainly most picturesque, and a perfect example of what can be done in sun-painting, and on all sides I am told it is an excellent likeness.'

JULIA MARGARET CAMERON, 1815–1879

A great eccentric, Mrs. Cameron was one of the outstanding personalities of the Victorian era. The wife of a retired Member of the Council of India, she took up photography with immense enthusiasm at the age of forty-eight. For her, photography became a 'divine art', and she devoted the rest of her life to its service. Her coal-house became her darkroom, and the glazed chicken-house was converted into the studio.

This was the time when the craze for the small *carte-de-visite* portrait with its stereotyped poses was at its height, and professional photographers did little else. They did not have to provide a good likeness, as long as it was a flattering pose, surrounded by expensive-looking furniture.

Having a complete disregard for convention, and working for sheer enjoyment and not for money, Mrs. Cameron could afford to go her own way, and thus she became quite involuntarily a pioneer in photography. Cultivating the close-up, and using very big plates (12″×15″), Mrs. Cameron did not need the elaboration of senseless studio accessories, and the intellectual force of her large head studies stands out so much the clearer. They are the works of a great personality, perhaps the most vigorous and expressive portraits we have of the great Victorians, for the distinguishing feature of Mrs. Cameron's work is that she had the real artist's faculty of piercing through the outward structure to the very soul of the individual. A neighbour and close friend of Alfred, Lord Tennyson at Freshwater, I.O.W., and herself a prominent figure in the highest literary and artistic society, Mrs. Cameron had unparalleled opportunities to entice the great Victorians before her camera. Her brilliant portraits of them rank with those of Hill and Adamson, and Nadar, as the finest produced in the nineteenth century. Whilst Hill's portraits were greatly influenced by eighteenth- and early nineteenth-century portrait painting, Mrs Cameron's large head studies are purely photographic in style, and far in advance of her time.

In 1874 Mrs. Cameron, at Tennyson's request, illustrated his *Idylls of the King* and other poems. (See No. 447 and 448.)

Born in Calcutta, in 1875 she returned to the East with her husband to their coffee plantations in Ceylon. (Bibliography: *Julia Margaret Cameron, Pioneer of Photography* by Helmut Gernsheim. London, 1948).

144. MRS. HERBERT DUCKWORTH (1846–1895) Signed and dated 1866. 11″×13¼″.
A niece of Mrs Cameron, and mother of Virginia Woolf and Vanessa Bell by her second husband, Sir Leslie Stephen.

145. MRS. HERBERT DUCKWORTH. Signed and dated 1867. 10½″×12½″.

146. 'THE MOUNTAIN NYMPH, SWEET LIBERTY' (CYLLENE WILSON). Signed and dated 1866. 11½″×14½″.

147. CYLLENE WILSON AS 'OPHELIA'. c. 1868. Signed. 11″×13¾″.
Bears Mrs. Cameron's inscription to Dante Gabriel Rossetti.

148. JACQUES BLUMENTHAL (1829–1908). c. 1867. Autographed and signed. 9½″×11½″.
Composer of songs; pianist to Queen Victoria.

149. JOHN EDWARD EYRE (1815–1901). Autographed, signed and dated 1867. 10″×12½″.
Carried out valuable explorations in Australia, 1841; was in turn Governor of New Zealand, St. Vincent, and Jamaica.

150. SIR JOHN HERSCHEL (1792–1871). Signed and dated 1867. 10½″×14″.
Astronomer, and pioneer of photography.
This is probably the most striking face Mrs. Cameron ever had before her lens, displaying the majesty and energy of genius softened by age.

151. SIR JOHN HERSCHEL, WITH BERET. Signed and dated 1867. 9¾″×12¾″.
Herschel wrote to Mrs. Cameron of this picture, 'The one of the old Paterfamilias with his black cap on is, I think, the climax of Photographic Art, and beats hollow everything I ever liked in photography before.'

152. THOMAS CARLYLE (1795–1881). 1867. Autographed and signed. 9½″×12¾″.
In thanking Mrs. Cameron for this photograph, Carlyle was rather restrained in his appreciation. He wrote, 'It is as if suddenly the picture began to speak, terrifically ugly and woebegone, but has something of a likeness — my candid opinion.' Roger Fry says of this portrait, 'Neither Whistler nor Watts come near to this in the breadth of the conception, in the logic of the plastic evocations, and neither approach the poignancy of this revelation of character.'

153. SIR HENRY TAYLOR (1800–1886). Signed and dated 1867. 10¾″×13¼″.
Poet, and important official at the Colonial Office. This is the finest portrait among the many Mrs. Cameron took of Sir Henry Taylor.

154. GIRL WITH FLOWERS. Signed and dated 1867. 10¾″×14″.

155. UNIDENTIFIED WOMAN. c. 1868. 10½″×12½″.

156. WILLIAM GIFFORD PALGRAVE (1826–1888). Signed and dated 1868. 10¼″×13″.
Diplomatist, linguist and traveller.

157. HENRY WADSWORTH LONGFELLOW (1807–1882). 1868. Autographed and signed. 10½″×13¾″.
The poet was photographed during a visit to Tennyson at Farringford.

158. MARIE SPARTALI (LATER MRS. W. J. STILLMAN). Signed and dated 1868. 10½″×13¾″.
A Greek beauty who was painted by D. G. Rossetti, Ford Maddox Brown and Burne-Jones.

159. MARIE SPARTALI AS 'HYPATIA'. c. 1870. Signed. 9½″×12″.

160. CHARLES DARWIN (1809–1882). Autographed, signed and dated 1869. 9″×11¾″.
Some copies of this photograph bear the great naturalist's inscription, 'I like this photograph very much better than any other which has been taken of me.' The date is probably a mistake, for according to *Life and Letters of Charles Darwin* he visited Freshwater in 1868.

161. ALFRED, LORD TENNYSON (1809–1892). 1869. Autographed and signed. 9½″×11¾″.
This is probably the finest portrait in any medium that was ever made of the Poet Laureate.

162. GEORGE FREDERIC WATTS (1817–1904). c. 1869. Autographed and signed. 11″×14½″.
A close friend, Watts greatly encouraged Mrs. Cameron in her photography and guided her artistic development.

163. THOMAS WOOLNER (1825–1892). c. 1869. 10″×12¼″
Sculptor and poet; a member of the Pre-Raphaelite Brotherhood.

164. WILLIAM PAGE WOOD, BARON HATHERLEY (1801–1881). Signed and dated 1869. 10½″×13½″.
Lord Chancellor.

165. TWO GIRLS WITH GRAPES. Signed and dated 1871. 9½″×14″.
A study showing the influence of the Pre-Raphaelites.

166. 'ALETHEA' (ALICE LIDDELL). 1872. 9½″×13½″.
The original of Lewis Carroll's 'Alice'. Modern copy from original negative.

167. FLORENCE FISHER. 1872. 9¾″×13″.
Mrs. Cameron's great-niece; became the third wife of Sir Francis Darwin. Modern copy from original negative.

168. 'FLORENCE' (FLORENCE FISHER). Signed and dated 1872. 10¾″×13¾″.
Bears inscription by G. F. Watts: 'I wish I could paint such a picture as this.' — high praise, indeed, from Britain's leading contemporary painter.

169. 'THE ANGEL AT THE SEPULCHRE' (MARY HILLIER). c. 1872. Signed. 10¾″×14¼″.
Mary Hillier was a Freshwater girl who became Mrs. Cameron's parlourmaid, and acted as her model more often than anyone else. She was known locally as 'Mary Madonna' because of the many photographs of her in that role. Bears inscription by G. F. Watts: 'Very beautiful, none better'.

LORD WALTER CAMPBELL

An amateur photographer.

170. MRS. FINNEY. 1884. 8″×6½″.

LEWIS CARROLL, 1832–1898

The Rev. Charles Lutwidge Dodgson, professor of mathematics at Christ Church, Oxford, is better known under his pseudonym as the author of the immortal 'Alice' books. Photography was his chief hobby and favourite subjects were his child-friends, usually beautiful little girls. He was also an inveterate lion-hunter and pursued many a celebrity with his camera. Lewis Carroll's copious diary-entries referring to photography show that his activities in this field ranged over the period 1856–1880, and the recent re-discovery of his extremely fine photographic work proves him — so far at least — to have been the best photographer of children in the nineteenth century.
(Bibliography: *Lewis Carroll — Photographer* by Helmut Gernsheim. London and New York,1949).

171. ALBUM NO. III entitled *Photographs Vol. III.* 10½″×11¼″
Contains 115 photographs of Victorian celebrities and Lewis Carroll's child-friends. Indexed in Lewis Carroll's hand. The photographs are nearly all autographed by the sitters. This album is the finest of the twelve extant Lewis Carroll albums (five of which are in the Gernsheim Collection). It formerly belonged to Charlotte M. Yonge, whose name and address are entered on the inside back cover.
Exhibited at the Lewis Carroll Centenary Exhibition, London, 1932; and at the Museum of Modern Art, New York, and George Eastman House, Rochester, in 1950.

172. ALBUM NO. VI. 10½″×7½″.
Inscribed by Lewis Carroll on the inside front cover 'Begun July 1856', and therefore his first album, in spite of its number. It is indexed by him and contains 70 photographs — chiefly portraits of the Dodgson family and their friends, with some views of Croft Rectory, Whitby, and the Lake District.
Exhibited at the Lewis Carroll Centenary Exhibition, London, 1932; and at the Museum of Modern Art, New York, and George Eastman House, Rochester, in 1950.

ALBUM NO. X. (see under O. G. Rejlander, No. 300)

173. ALBUM. 7½″×8¾″.
Contains 10 photographs by Lewis Carroll, all portraits taken at Croft and Coniston in August and September 1857. The album formerly belonged to Agnes Grace Weld, a niece of Mrs. Tennyson and an early child-friend of Lewis Carroll.

174. COATES. c. 1857. 4¼″×6″.
Daughter of one of the employees at Croft Rectory, the home of the Dodgson family.

175. THE MISSES MARGARET ANNE AND HENRIETTA MARY LUTWIDGE. c. 1858. 6″×7″.
Two of Lewis Carroll's aunts.

176. 'THE ELOPEMENT' (ALICE JANE DONKIN). 9th October 1862. 7¼″×9¼″.

177. THE ROSSETTI FAMILY. 7th October 1863. Uncut print 10″×8″.
Mrs. Frances Rossetti playing chess with Dante Gabriel: Christina, and Maria Francesca.

178. ARTHUR HUGHES AND HIS DAUGHTER AGNES. 12th October 1863. Uncut print 10″×7¾″.
Arthur Hughes (1832–1915) was a Pre-Raphaelite painter, though never a member of the Brotherhood.

179. ALEXANDRA ('XIE') KITCHIN. 12th June 1873. Uncut print 6″×5″.
Daughter of the Rev. George William Kitchin, Xie was one of Lewis Carroll's favourite child friends in the 1870's.

180. NEGATIVE OF LEWIS CARROLL'S FAVOURITE PORTRAIT OF HIMSELF. c. 1863. 3½″×4½″.
Taken in his rooms with the lens uncapped by someone else (probably Rejlander). Whenever Lewis Carroll was pressed for his photograph by a child friend he gave a *carte-de-visite* or cabinet size copy of this picture.

181. CARTE-DE-VISITE PORTRAIT OF LEWIS CARROLL, HOLDING A LENS.
Taken by O. G. Rejlander (q.v.) on 28th March, 1863.

182. CATALOGUE OF THE FIFTH EXHIBITION OF THE PHOTOGRAPHIC SOCIETY OF LONDON held at the South Kensington Museum, 1858.
Item No. 174 lists 4 photographs by C. L. Dodgson. This was the only occasion on which Lewis Carroll publicly exhibited photographs.

183. AGNES GRACE WELD. c. 1861. 4½″×6″.
Daughter of Charles Richard Weld, F.R.S.

184. BEATRICE HENLEY. 1st September 1862. 3¾″×5¼″.
Daughter of the Rev. Robert Henley, Vicar of Putney.

185. 'IT WON'T COME SMOOTH' (IRENE MACDONALD). July 1863. 6″×8″.
Daughter of George MacDonald, novelist and poet. In composing this picture Lewis Carroll may have been intending to illustrate his own poem (1861)
'My mother bids me bind my hair,
And not go about such a figure;
It's a bother, of course, but what do I care?
I shall do as I please when I'm bigger.'

186. DANTE GABRIEL ROSSETTI (1828–1882). 6th October 1863. 4″×5¼″.
Founder-member of the Pre-Raphaelite Brotherhood.

187. CHRISTINA ROSSETTI AND HER MOTHER, MRS. FRANCES ROSSETTI. 7th October 1863. 3¼″×4¼″.
Christina Rossetti (1830–1894). Poet.

188. ARTHUR HUGHES JNR. 12th October 1863. 3¼″×4¼″
Son of the painter (No. 178).

189. THE REV. C. BARKER AND HIS DAUGHTER MAY. 6th June 1864. 6″×8″.

190. MARIA WHITE. 11th July 1864. 3¼″×4¼″.
Niece of the porter at Lambeth Palace.

191. MADELINE CATHERINE PARNELL. 7th July 1864. 2¼″×3¼″.
Niece of Mrs. Longley, wife of the Archbishop of Canterbury.

192. ALICE CONSTANCE WESTMACOTT. 9th July 1864. 3¼″×4¼″.
Daughter of the sculptor Richard Westmacott.

193. AILEEN WILSON-TODD. 4th September 1865. 3¼″×4¼″.

194. ELLEN TERRY (1847–1928). 14th July 1865. 2¼″×3¼″.
Lewis Carroll, being keenly interested in the theatre, greatly admired Ellen Terry and her sister Kate.

195. JOHN EVERETT MILLAIS WITH HIS WIFE AND DAUGHTERS MARY AND EFFIE. 21st July 1865. 3¼″×4¼″.
Sir John Everett Millais (1829–1896). One of the three founder-members of the Pre-Raphaelite Brotherhood. President of the Royal Academy. Effie Gray was Ruskin's 'Fair Maid of Perth'; she posed for Millais' 'Order of Release', and married him after the annulment of her marriage with Ruskin.

196. EFFIE MILLAIS. 20th July 1865. 3¼″×4¼″.

197. CYRIL BICKERSTETH. 7th September 1865. 4¼″×6¼″.
Son of Robert Bickersteth, second Bishop of Ripon.

198. CHARLOTTE M. YONGE AND HER MOTHER, MRS. FRANCES MARY YONGE. 4th May 1866. 3¼″×5″.
Charlotte M. Yongé (1823–1901). Novelist.

199. ELLA MONIER-WILLIAMS. 24th May 1866. 3¼″×5″.
Daughter of Sir Monier Monier-Williams, Professor of Sanskrit at Oxford.

Nos. 183–199 are reproductions made by H.G. from photographs in the albums exhibited.

A. CLAUDET AND E. T. PARRIS.

Antoine Claudet. See also under Daguerreotype.
Edmund Thomas Parris (1793–1873). Fashionable painter of portraits and landscapes, and of the famous Panorama of London which was a great attraction at the Colosseum, Regents Park. Painted Queen Victoria's coronation, and was a regular contributor to the Royal Academy and British Institution Exhibitions. Restored Thornhill's paintings in the dome of St. Paul's Cathedral.

200. A LADY. Dated August 1858. 5″×6½″.
Signed by E. T. Parris on the table, and signed by both the photographer and the painter on the back of the photograph. This picture is a striking example of collaboration between a leading photographer and a well-known painter.

PHILIP HENRY DELAMOTTE

(see also under Calotype)

201. INTERIOR OF THE CRYSTAL PALACE, SYDENHAM. 1859. 9¼″×11¼″.

202. THE CRYSTAL PALACE, SYDENHAM. VIEW FROM THE ROSE GARDEN. 1859. 7¼″×9¼″. Reproduction by H.G.

After the close of the Great Exhibition in Hyde Park, 1851, the Crystal Palace was eventually re-erected in a greatly enlarged form on Sydenham Hill, a few miles south of Central London. It was re-opened by Queen Victoria on 10th June 1854.

These photographs are two of a series which Delamotte executed expressly for the Crystal Palace Art Union in 1859, and are a sequel to his *magnum opus*, a series of sixty views entitled *The Progress of the Crystal Palace at Sydenham*, 1854.

PETER HENRY EMERSON, 1856–1936

Born in Cuba of an American father and an English mother, Emerson settled in England in 1869. He studied medicine and took his M.B. degree in 1885, but abandoned his medical career the following year in order to devote himself to writing and photography, having been a keen amateur photographer since 1882. During the next ten years Emerson published a number of books, several of them in limited editions, illustrated with his own photographs — chiefly in the form of photogravures and photo-etchings. His 'naturalistic photography' caused a sensation in photographic circles, and his book of that title (1889) burst like a bombshell amongst the stagnant artificialities of the current pictorialism. As rocket-like as he had risen, Dr. Emerson vanished from the photographic scene after a retrospective exhibition of his photographs in 1900.

(Bibliography: *The English Emersons* by P. H. Emerson. London, 1898).

203. 'MARSH MAN GOING TO CUT SCHOOF-STUFF' 1885. 11¼″×8″.

204. 'GATHERING WATER-LILIES'. 1885. 11¼″×7¼″.

Reproductions by H.G. of original photographs in Emerson's and T. F. Goodall's book *Life and Landscape of the Norfolk Broads*, London, 1886. (No. 452).

205. 'A WINTER'S MORNING'. 1886. 11¼″×7″.

206. 'A SPRING-IDYL'. 1886. 7¼″×10¼″.

207. 'GOING TO MARKET'. 1886. 10¼″×8¼″.

208. 'A FISHERMAN AT HOME'. 1886. 9″×9¼″.

Photogravure plates from Emerson's book *Pictures from Life in Field and Fen*, London, 1887.

209. 'A STIFF PULL'. 1887. 11¼″×8¼″.

210. 'IN THE BARLEY HARVEST'. 1887. 9¼″×9¼″.

211. 'HAYMAKER WITH RAKE'. 1887. 8″×11″.

Photogravure plates from Emerson's book *Pictures of East Anglian Life*, London, 1888.

212. 'GETTING READY FOR FISHING'. 1887. 7″×4¼″.

Photo-etching in Emerson's book *Wild Life on a Tidal Water*, London, 1890.

213. WINTER LANDSCAPE. 1891. 6¼″×4″.

Photo-etching from Emerson's book *On English Lagoons*, London, 1893.

214. WINTER LANDSCAPE. c. 1891. 5¼″×4″

Photo-etching from Emerson's book *Marsh Leaves*, London, 1895.

WILLIAM ENGLAND, –1896

Started as a daguerreotypist in the mid-forties. In 1854 England joined the newly-formed London Stereoscopic Company, for which he undertook journeys to Ireland, America, and France, taking thousands of stereoscopic pictures which were published under the firm's name. He was among the very first to take instantaneous street views with pedestrians and vehicles in motion (Paris, 1861). In 1863 William England made himself independent and began his famous series of views in Switzerland, the Tyrol, and Italy. During the next thirty years he added new pictures to this series every summer. They brought him renown as one of the leading English landscape photographers.

England's career is particularly interesting because it spans the whole evolution of photography from the daguerreotype to the roll-film, and it is remarkable how well he adapted himself to each new phase.

215. ALBUM ENTITLED 'PANORAMIC VIEWS OF SWITZERLAND, SAVOY AND ITALY'. c. 1864. 10¾″×7¼″.
Contains 77 original photographs 6½″×3¼″.

216. ISLAND OF S. GIULIO, LAKE ORTA. c. 1864. 6½″×3¼″

217. AOSTA. ROMAN AMPITHEATRE. c. 1864. 6½″×3¼″.

218. MONTE ROSA AND THE LYSKAM FROM THE CORNERGRAT. c. 1864. 6½″×3¼″.

219. COURMAYEUR AND THE COL DU GEANT. c. 1864. 6½″×3¼″.
Reproductions by H.G. from the album (No. 215).

H. FAVARGER

Amateur photographer.

220. FIRE AT A CANDLE FACTORY. Dated 1885.
A series of three photographs — among the earliest British news photographs.

ROGER FENTON, 1819–1869

After taking an M.A. degree Fenton studied art in Paris, and there, early in the 1840's, first became acquainted with the new art of photography. Returning to London, he studied law and became a barrister. About 1847 he joined the Photographic Club, and after several unsuccessful attempts (in 1851–52) succeeded in January 1853 in forming the Photographic Society of London (now the Royal Photographic Society of Great Britain) on the lines of other learned societies. Fenton was the Society's first secretary, and was elected Vice-President five years later.

Considering the shortness of his photographic career, Fenton was one of the most prolific as well as most versatile photographers. He made a photographic tour of Russia in 1852, went as first war photographer to the Crimea, took a large series of photographs of art treasures for the Trustees of the British Museum, 1856–57 (see Nos. 238–9), some intimate 'at home' portraits

of the Royal family, a series of English cathedrals, and photographed arrangements of fruit and flowers so realistically that he was accused of plagiarising George Lance, the contemporary painter! Fenton also illustrated several books with his photographs. In 1862 at the height of his fame he suddenly abandoned photography and resumed his former legal profession.

Fenton's renown rests chiefly on his 350 Crimean War pictures, taken between March and June 1855. His equipment filled thirty-six large chests, and he operated from a horse-drawn photographic van which also served on occasion as cooking, living, and sleeping quarters. Conditions were extremely difficult. 'When my van door is closed', he wrote, 'perspiration is running down my face, and dropping off me like tears. . . . The developing water is so hot that I can hardly bear my hands in it.' To add to these troubles, Fenton was continually badgered to take portraits of soldiers and officers, 'and if I refuse to take them, I get no facilities for conveying my van from one locality to another.'

'. . . Fenton studied art under Paul Delaroche in Paris, and there first became acquainted with the new art of photography.'

221. ROGER FENTON'S LETTERS FROM THE CRIMEA. 1855. Notebook containing MS. copies (made before despatch) of all letters sent by Roger Fenton during his journey to the Crimea and stay there, to his family, and publisher Thomas Agnew of Manchester.

222. FENTON'S PHOTOGRAPHIC VAN. 1855. 8½″×6½″. Reproduction by H.G.

223. ENCAMPMENT OF HORSE ARTILLERY. 1855. 14″×11″

224. THE COUNCIL OF WAR. LORD RAGLAN, OMAR PASHA AND GEN. PELISSIER. 1855. 6½″×7½″. Taken at 4 a.m. on the morning of the taking of the Mamelon.

225. THE CATTLE PIER, BALACLAVA. 1855. 14½″×11″.

226. COSSACK BAY, BALACLAVA. 1855. 14″×11½″.

227. 'A QUIET DAY IN THE MORTAR BATTERY'. 1855. 13¾″×9¾″.

228. LIEUT. GEN. SIR GEORGE DE LACY EVANS. 1855. 6½″×7½″.

229. ISMAIL PASHA AND ATTENDANTS. 1855. 6½″×7½″.

230. THE SANITARY COMMISSION. DR. JOHN SUTHERLAND AND SIR ROBERT RAWLINSON. 1855. 6½″×7¾″.

231. 'HARDSHIPS' OF CAMP LIFE. 1855. 6½″×7″.

232. THE COOKHOUSE OF THE 8TH HUSSARS. 1855. 8″×6½″. (On the extreme left can be seen part of Fenton's photographic van).

233. LIEUT. GEN. SIR GEORGE BROWN AND STAFF. 1855. 6½″×6½″.

234. LIEUT. COL. BROWNRIGG AND THE CAPTURED RUSSIAN BOYS. 1855. 6½″×6½″.

235. OFFICERS OF THE 71ST HIGHLANDERS. 1855. 6½″×7½″.

236. GEN. BOSQUET AND CAPT. DAMPIERE. 1855. 6″×7¾″.

237. CATALOGUE OF THE EXHIBITION OF PHOTOGRAPHS TAKEN IN THE CRIMEA BY ROGER FENTON. Held at the rooms of the Water Colour Society, Pall Mall, October 1855.

238. ALBUM, 17½″×23″, containing 132 photographs taken for the Trustees of the British Museum in 1856–57, and published for them by Messrs. Colnaghi, 1856–58. The majority of the photographs are 10″×13″. This collection is a presentation album from the Trustees to Disraeli.

239. BUST OF ATYS. 1856–57. 9½″×11½″. Reproduction by H.G. from the album (No. 238).

240. A RUINED ABBEY (attributed to Roger Fenton). c. 1860. 7¾″×9″.

FRANCIS FRITH, 1822–1898

Apprenticed to a Sheffield cutlery firm, Frith later entered the wholesale grocery trade in Liverpool. In 1850 he started a printing firm, a few years later became interested in photography, and was soon the leading British travelling photographer, and the largest publisher of continental views. In 1859 he removed his printing establishment to Reigate and added a photographic printing department to cope with the enormous number of prints required for his many publications. He issued portfolios of Germany, Austria, Switzerland, Italy, Gibraltar, Spain and Portugal, as well as innumerable British views.

Frith's finest work is contained in the many publications which ensued from his three tours to Egypt, Nubia, Palestine and Syria between 1856 and 1860. On his third journey he went further up the Nile than any photographer had been before, travelling by horse and camel beyond the Fifth Cataract, about 1,500 miles from the Nile Delta. On all expeditions, he worked with three cameras of different sizes — for stereoscopic views, and 8″×10″ and 16″×20″ plates. The task of producing these photographs was a feat of endurance with the thermometer often at 110°F. in his tent. Frith relates that the collodion sometimes actually boiled when poured upon the glass plate. At other times sandstorms ruined his work. The 16″×20″ photographs are the largest original prints of that period which have come to my notice.

In the 1860's Frith illustrated a number of books with his photographs (see No. 429 and No. 439).

241. HYPAETHRAL TEMPLE AT PHILAE. 1858. 19″×14½″. (In the foreground can be seen the boat in which Frith travelled and had his darkroom.)

242. PYRAMIDS OF DAHSHOOR. 1858. 19″×14½″.

243. VIEW OF CAIRO FROM THE CITADEL. 1858. 19″×14½″

244. TEMPLE OF KOM-UMBOO. 1858. 19″×14½″.

245. MOSQUE OF THE EMIR AKHOOR IN CAIRO. Signed. 1858. 19″×14½″.

246. THE GREAT PYRAMID AND THE GREAT SPHINX. Signed and dated 1858. 19″×14½″.

247. MOUNT SERBAL. Signed and dated 1858. 19″×14½″.

248. THE PYRAMIDS OF EL-GIZEH. 1858. 19″×14½″.

In spite of their great size none of these photographs are enlargements. They are plates from *Egypt, Sinai and Jerusalem*, with text by Mr. and Mrs. Reginald Stuart Poole, published in London, c. 1860. The text pages of the book measure 29″×21″!

Plate 1. D. O. HILL AND R. ADAMSON: Miss Chalmers and her Brother. c. 1843. No. 36

Plate 2. W. H. FOX TALBOT: 'The Open Door'. 1844. No. 92

Plate 3. F. R. PICKERSGILL: 'Sunshine and Shade'. c. 1856. No. 291

Plate 4. ANON: Mrs. William Blake. Ambrotype. c. 1856. No. 109

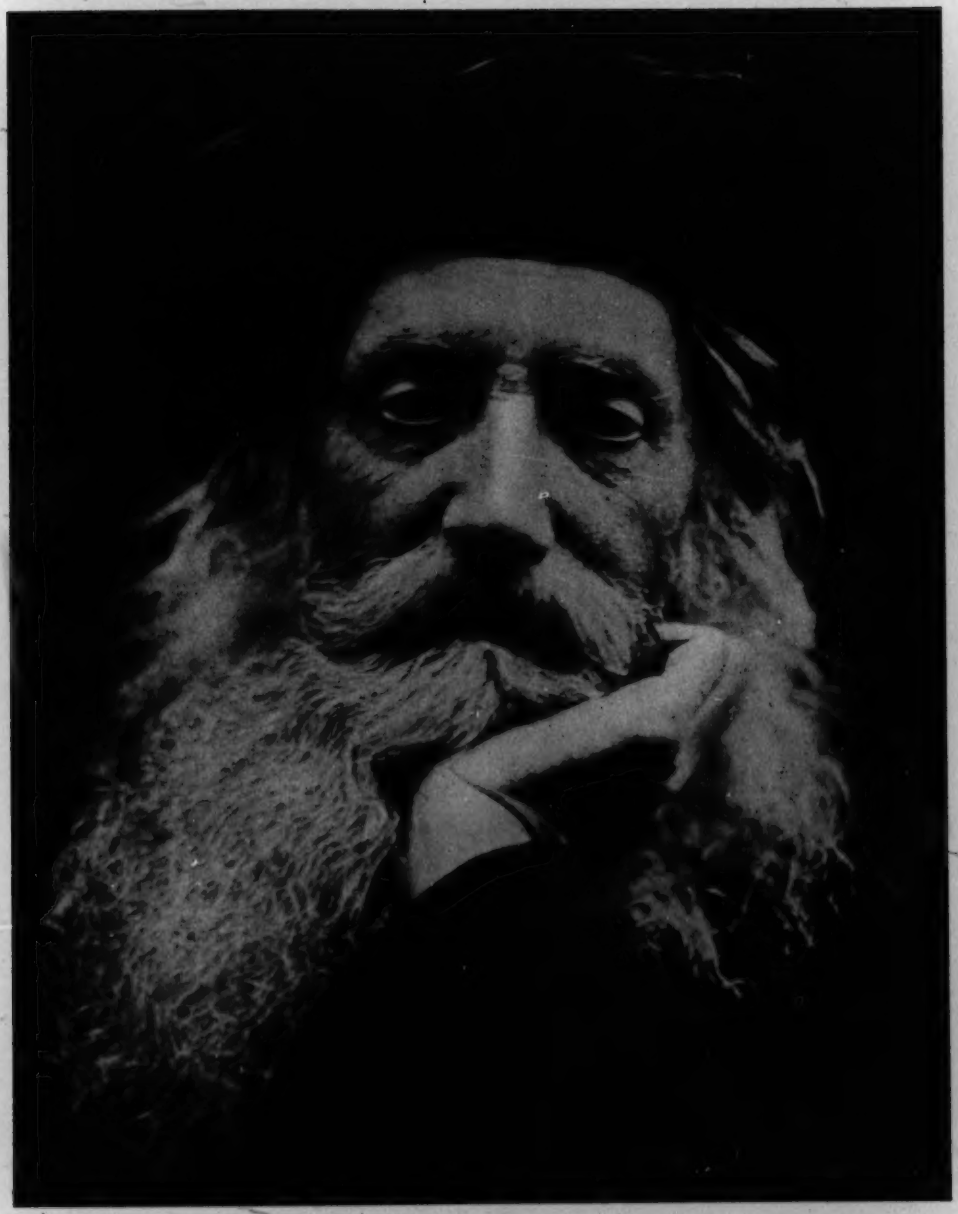

Plate 5. JULIA MARGARET CAMERON: Sir Henry Taylor. 1867. No. 153

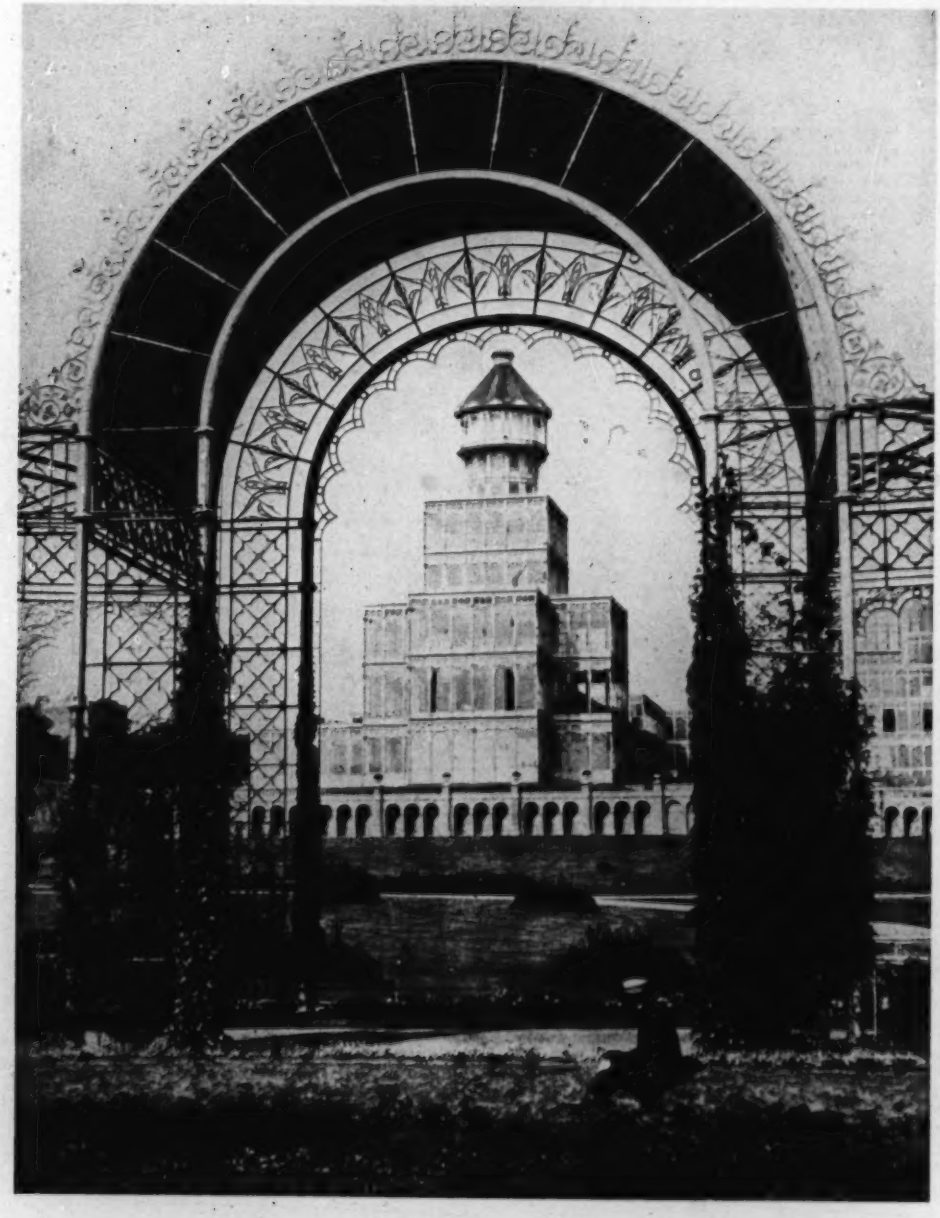

Plate 6. P. H. DELAMOTTE: The Crystal Palace, Sydenham. 1859. No. 202

Plate 7. P. H. DELAMOTTE: Interior of the Crystal Palace, Sydenham. 1859. No. 201

Plate 8. ROBERT MACPHERSON: Garden of the Villa d'Este, Tivoli. c. 1855. No. 271

Plate 9. C. W. WILSON. Princes Street, Edinburgh. c. 1861. No. 389

Plate 10. ROGER FENTON: Gen. Bosquet and Captain Dampiere. Crimean War. 1855. No. 236

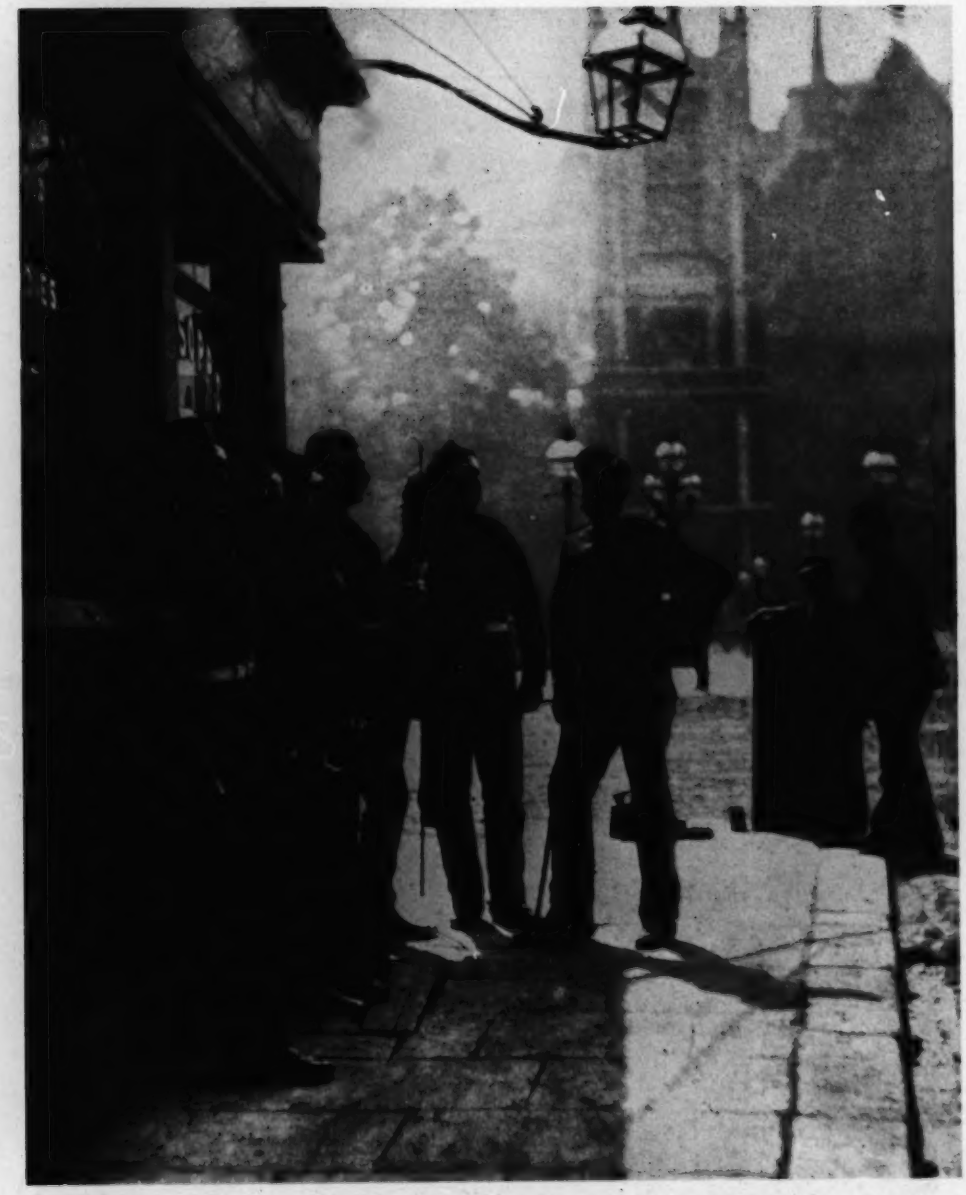

Plate 11. J. THOMSON AND ADOLPHE SMITH: Recruiting Sergeants. 1876. No. 406

Plate 12. O. G. REJLANDER: Nude. c. 1860. No. 298

Plate 13. LEWIS CARROLL: Hallam Tennyson. 1857. No. 173

Plate 14. P. H. EMERSON: 'A Stiff Pull.' 1887. No. 209

Plate 15. T. F. GOODALL: 'Towing the Reed'. 1885. No. 257

Plate 16. WILLIAM ENGLAND: Lake Orta. c. 1864. No. 216

249. FACADE OF THE GREAT TEMPLE OF ABU SIMBEL. 1857. 6¼″×8¼″.
Reproduction by H.G. from original photograph published in *Egypt and Palestine photographed and described by Francis Frith*, London, 1858–59. (See No. 429.)

W. GADDUM

Amateur photographer.

250. SEASCAPE. 1884. 8¼″×6¼″.

COL. JOSEPH GALE, –1906.

Architect, and well-known amateur photographer from 1859 on.

251. 'A FOGGY DAY ON THE THAMES.' 1888. 5″×7″.
Photogravure plate from *Sun Artists*, 1889. Ordinary edition, published in eight parts. (See also No. 455.)

THOMAS F. GOODALL

Landscape painter, and amateur photographer. Collaborated with P. H. Emerson (q.v.) in their joint publication *Life and Landscape of the Norfolk Broads*, London, 1886.

252. 'SETTING THE BOW NET'. 1885. 11½″×6½″.
253. 'TAKING UP THE EEL NET'. 1885. 11″×7½″.
254. 'SNIPE SHOOTING'. 1885. 11½″×7½″.
255. 'GUNNER WORKING UP TO FOWL'. 1885. 11½″×7½″.
256. 'DURING THE REED HARVEST'. 1885. 11½″×8½″.
257. 'TOWING THE REED'. 1885. 11½″×8½″.
258. 'THE FOWLER'S RETURN'. 1885. 11½″×7″.
Reproductions by H.G. of original photographs in *Life and Landscape of the Norfolk Broads* by P. H. Emerson and T. F. Goodall, London, 1886. (See No. 452.)

S. J. B. HAYDON

Amateur photographer.

259. FAMILY GROUP. Dated 1857. 4½″×5½″.
260. A MAN SKETCHING. Dated 1859. 4½″×6½″.

ALICE HUGHES

Court Photographer in the late 'eighties and 'nineties and first two decades of the twentieth century.

261. THE PRINCESS OF WALES (LATER QUEEN ALEXANDRA) (1844–1925). c. 1889. Platinotype 8¼″×11¼″. Signed.
On the back Alice Hughes wrote: "This is the first photograph I ever took of her late Majesty, and as the dress was rather stiff (and in those days one was allowed to make a picture) I asked the Queen if she would mind having the fichu. Her Majesty consented and said, 'Yes, give me the fichu.'"
262. ARCH-DUCHESS STEPHANIE. c. 1905. Platinotype 5¼″×8″.
Widow of Crown-Prince Rudolph of Austria.
263. ALBUM ENTITLED 'ROYALTY'. 14¼″×11″.
Contains 106 portraits 4″×6″ and 6″×8″ taken in the period June 1894 to 1899. The sitters are nearly all daughters and granddaughters of Queen Victoria, and Continental royalties connected by marriage with the English Royal family. The photographs, which are all platinotypes, are the epitome of an elegant age. This was Alice Hughes's own album.

BAYNHAM JONES, 1806–1890

Amateur photographer living at Cheltenham. He worked with every process from daguerreotype to gelatine dry plates.

264. 'A MISTY MORNING'. c. 1862. 9″×7¼″.

RICHARD AND CHERRY KEARTON

Photographers of wild life from c. 1892 on.

265. BLACK-THROATED DIVER. c. 1900. 11″×7½″.
266. PEEWIT (OR LAPWING). c. 1900. 7½″×10″.
267. YOUNG WILLOW WRENS. c. 1900. 9½″×8″.
268. CUCKOO FED BY SEDGE-WARBLERS. c. 1900. 8″×11¼″.
Photogravures from a publication of 15 plates entitled *Pictures from Nature*, London, 1905. In this Richard Kearton states that these were chosen from more than 10,000.

J. LAFAYETTE

Firm of professional portrait photographers founded about 1883 by J. Lafayette, with studios in Dublin, Glasgow and Manchester.

269. THE DUCHESS OF YORK (LATER QUEEN MARY) (1867–). Autographed and dated 1894. 10″×14″.

J. DILWYN LLEWELLYN

Early amateur photographer working first with the calotype process and later with collodion. Founder-member of the Photographic Society. His pictures appear among others in several photographically-illustrated books.

270. 'THE COUNTRY BRIDGE'. c. 1857. 8¼″×6″.
Plate from *The Sunbeam*, edited by P. H. Delamotte, London, 1859.

ROBERT MacPHERSON, –1872

Scottish photographer who lived in Rome and started photography in 1851. Within a short time he won the reputation of being the leading photographer of architectural views and Roman antiquities. MacPherson used first the albumen-on-glass process, and after 1856 collodio-albumen, a modification of the wet collodion process published by Dr. Taupenot in September 1855. MacPherson found this 'dry' preservative process best adapted for subjects requiring long exposures. He wrote, 'For a distant landscape in good light five minutes was enough; for near objects ten to twenty minutes; and in some of the sculpture galleries, where

the light was deficient, two hours were often required, and in one or two cases even an exposure of two days was necessary to produce a good negative.'

Though his work has fallen into oblivion, MacPherson undoubtedly deserves the designation of the finest architectural photographer of the nineteenth century. Many of his pictures are poetic descriptions, not mere transcriptions, of the scene. He emphasized in a striking way the mouldering grandeur of these Roman subjects. In 1863 he published a guidebook to the Vatican sculptures.

271. IN THE GARDEN OF THE VILLA D'ESTE, TIVOLI. c. 1855. 12″×15½″.

272. VIEW OF THE CAPITOLINE HILL, ROME. c. 1856. 15½″×8½″.

273. ST. PETER'S AND THE CASTEL S. ANGELO, ROME. c. 1856. 14½″×8½″.

274. ARCH OF TITUS, ROME. RELIEF SHOWING TRIUMPHAL PROCESSION WITH LOOT FROM THE TEMPLE OF JERUSALEM. c. 1857. 11″×14½″.

275. FORUM ROMANUM, WITH TEMPLE OF SATURN. c. 1857. 16″×12″.

276. FORUM ROMANUM: TEMPLE OF ANTONINUS PIUS AND FAUSTINA. c. 1857. 11″×15″.

277. THE CASCADES, TIVOLI. c. 1857. 15½″×12″.

278. VIEW OF ROME. c. 1857. 15½″×8″.

279. TRAJAN'S COLUMN, ROME. c. 1858. 12½″×16½″.

280. CLOISTERS OF BASILICA DI S. PAOLO, ROME. c.1858. 14½″×11½″.

281. 'TEMPLE OF VESTA' AND FOUNTAIN, ROME. c. 1858. 15″×10½″.

282. PIAZZA DEL POPOLO, ROME. c. 1858. 14½″×11″.

283. ST. PETER'S AND THE VATICAN. c. 1860. 14½″×10½″.

284. VILLA D'ESTE, TIVOLI. c. 1860. 11″×14″.

285. VIEW OF ST. PETER'S ROME, FROM THE PINCIO. c. 1860. 9½″×6″.

286. LIST OF SUBJECTS PHOTOGRAPHED BY MACPHERSON published in 1858.

JAMES MUDD

Took up photography soon after the introduction of the collodion process, but on the publication of the collodio-albumen process changed over to the more convenient though slower preservative or 'dry' process. Mudd quickly made a reputation as a brilliant landscape photographer, but for his bread and butter he took portraits in his Manchester studio.

In 1866 Mudd published a little book on the collodio-albumen process, on composition, and other subjects.

287. FLOODS AT SHEFFIELD. Dated 1864. 14½″×11″.

EADWEARD JAMES MUYBRIDGE, 1830–1904

(Original name Edward James Muggeridge). Emigrated to America in 1852. As chief photographer of the U.S. Government, and later for the Pacific Mail Steamship Co. and the Central Pacific Railway Co., Muybridge undertook many photographic surveys in various parts of the continent. It was said that his magnificent views made the beauties of America better known than had ever been done by either pen or pencil.

Muybridge's most important contribution to photography was the investigation of the movement of animals and human beings. This started in 1872 when he was consulted about an old controversy — whether a trotting horse at any portion of its stride has all its feet entirely off the ground. In May that year Muybridge settled the question in the affirmative by taking several photographs of a trotting horse. He resumed his experiments in 1877, still using wet plates. Twelve cameras (later increased to twenty-four) were arranged at regular intervals, their shutters being operated by means of thin threads stretched across the horse's path. The results of these experiments were published the following year under the title *The Horse in Motion*. A wider investigation of animal locomotion was undertaken by Muybridge in 1883–85, under the auspices of the University of Pennsylvania. In 1887 he embodied these researches in eleven volumes of 781 photo-engravings, illustrating a total of over two thousand figures of moving men, women, children, beasts and birds. Muybridge's investigations not only exposed the absurdity of the conventional 'rocking-horse' attitude so beloved by animal painters, but he directly paved the way for cinematography with his Zoopraxiscope (invented 1881) which projected animated pictures upon a screen.

In 1900 Muybridge returned to live at his birthplace, Kingston-on-Thames, and bequeathed to the public library there his Zoopraxiscope, hundreds of his photographic slides, and his cuttings book.

288. HORSE AND RIDER. 1883–85. 12″×9″.

289. GREYHOUND. 1883–85. 17½″×6½″.

290. MULE. 1883–85. 12½″×9½″.
Plates from *Animal Locomotion* by E. Muybridge, Philadelphia, 1887.

FREDERICK RICHARD PICKERSGILL
1820–1900

Historical painter; R.A. 1857. Son-in-law of Roger Fenton (q.v.)

291. 'SUNSHINE AND SHADE'. c. 1856. 7½″×6½″.
Plate from *The Sunbeam*, edited by P. H. Delamotte, London, 1859.

OSCAR GUSTAVE REJLANDER, 1813–1875

A Swede by birth, Rejlander studied art in Rome and there made his living as a portrait painter and by copying Old Masters. In 1852 he married an Englishwoman and settled in Lincoln, where he continued as a portrait painter. With the idea of using photography as an aid to painting he took lessons in 1853. It was not until November 1855 that he opened a photographic studio in Wolverhampton. Five years later he moved to London and there worked as a professional photographer until his death.

Rejlander achieved immortality in the annals of photography with a pretentious allegorical composition called 'The Two Ways of Life'—a combination picture size 30½″×15½″ made from over thirty negatives, and first exhibited at the Manchester Art Treasures Exhibition, 1857, where it was bought by the Prince Consort.

Rejlander's main means of livelihood came from portraiture, and the sale of nude studies of women and children for artists to paint from. For the sake of reputation he followed up 'The Two Ways of Life' with a few other combination pictures, though nothing on so large a scale or of quite so controversial a nature. His best work is embodied in his hitherto unknown genre-pictures — convincingly posed 'action' shots of street characters, which in their naturalness stand in striking contrast to the monstrous artificialities he produced when he aimed at making his photographs High Art.

A brilliant photographer of children, Rejlander attracted the attention of Lewis Carroll and Charles Darwin. The former he assisted with friendly advice; with the latter he collaborated on his book *The Expression of the Emotions in Man and Animals* (see No. 306).

292. ALBUM. 11″×15″.
Containing 59 photographs, chiefly studies of nudes and children. The album formerly belonged to the artist Cecil Gordon Lawson (1851–82).

293. 'THE SPINNING-WHEEL'. c. 1857. 6″×8″.

294. FEEDING THE CAT. c. 1857. 6″×8¼″.

295. 'NIGHT IN LONDON'. c. 1860. 6″×8″.

296. 'SUMMER' (Mrs. Rejlander). c. 1860. 6″×8″.

297. STUDY OF HANDS AND VASE. c. 1860. 7⅛″×6.

298. NUDE. c. 1860. 6″×8¼″.
This magnificent study is in every way equal to Etty's finest nudes.

299. GIRL WITH BOOK. c. 1862. 6″×8″.

Nos. 293–299 are reproductions by H.G. of photographs in this album (No. 292).

(See also Nos. 390–393 which come from the same album).

300. LEWIS CARROLL'S ALBUM NO. X entitled *Professional and Other Photographs*. 12¼″×14¾″.
Contains 32 photographs by Rejlander, among others.
Exhibited at the Lewis Carroll Centenary Exhibition, London, 1932; and at the Museum of Modern Art, New York, and George Eastman House, Rochester, U.S.A., 1950.

301. TWO LITTLE SISTERS. c. 1863. 6″×8″.

302. THE TOILET. c. 1866. 6″×8″.
Reproductions by H.G. of photographs in this album (No. 300).

303. TWO SISTERS. c. 1858. 6″×8″.

304. A LITTLE GIRL AT WINDOW. c. 1864. 6″×8″.

305. 'FAMILY LIKENESS'. Dated 1866. 9″×7″. Signed.

306. 'THE EXPRESSION OF THE EMOTIONS IN MAN AND ANIMALS' by Charles Darwin. London 1872.
Containing 20 heliotype illustrations by O. G. Rejlander, in several of which he and Mrs. Rejlander act the required emotions.

JAMES ROBERTSON

Chief engraver to the Imperial Mint at Constantinople, and an enthusiastic photographer. In 1853 he published a series of photographic views of that city, which was followed by similar series of Malta and Athens. Whether by design of coincidence, James Robertson arrived in the Crimea soon after Roger Fenton left. He 'went into action' with his camera immediately after the withdrawal of the Russians from Sebastopol on 8th September 1855, and took some magnificent photographs of the Russian batteries, and the English and French entrenchments. Robertson's pictures thus form in a sense a continuation, though a very short one, of Fenton's series.

307. INTERIOR OF THE REDAN, TAKEN IMMEDIATELY AFTER THE FALL OF SEBASTOPOL. 1855. 11¼″×8¼″.

HENRY PEACH ROBINSON, 1830–1901

A keen artist from early youth, Robinson succeeded in having a picture hung at the Royal Academy in 1852. In 1854, while bookshop assistant in Leamington, Robinson took up photography, but it was not until January 1857 that he ventured out on his new career and set up a professional portrait studio in that town. The following year he became famous almost overnight with his combination picture 'Fading Away' which, like Rejlander's 'Two Ways of Life', aroused enormous controversy. From then on, Robinson resolved to produce at least one new composition every year, but for his living he relied entirely on the remunerative fashion for *cartes-de-visite*. Retiring in 1864 for reasons of health, Robinson was able to resume his photographic activity four years later (with N. K. Cherrill as partner) at a studio in Tunbridge Wells, where he remained in business for the next twenty years.

Robinson was one of the leading pictorialists in England, and 'the most be-medalled photographer in the world'. He wrote several books and numerous articles which greatly influenced the development of pictorial photography in Great Britain.

Final retirement from business in 1888 by no means meant giving up photography. On the contrary, Robinson was now able to devote more time to the literary side of photography and to the organisation of exhibitions at the Photographic Society (of which he had become a Vice-President in 1887) and later, the London Salon.

308. 'THE LADY OF SHALOTT'. 1861. 20½″×12″.
Combination print from two negatives.
The attempt to illustrate by an art so realistic as photography Tennyson's mystic and fantastic poem was a bold one. It is an imaginative picture, and has none of the ludicrousness usually present in this kind of photograph. Robinson wrote thirty-one years later (*Photographic Quarterly*, 1892): 'I made a barge, crimped the model's long hair, P.R. fashion, laid her on the boat in the river among the water lilies, and gave her a background of weeping willows, taken in the rain that they might look dreary; and really they were very expressive. . . . I think I succeeded in making the picture very Pre-Raphaelite, very weird, and very untrue to nature — I mean imaginative; but it was a ghastly mistake to attempt such a subject in our realistic art, and with the exception of an Ophelia done in a moment of aberration, I never afterwards went for themes beyond the limits of the life of our day.'

309. 'BRINGING HOME THE MAY'. 1862. 19″×8¼″.
In spite of what Robinson said, this picture seems more consciously artificial than No. 308. It was Robinson's most ambitious effort, being printed from nine separate negatives. The inspiration for this composition came from Spencer's poem 'May', which caught his imagination. Immediately he started making sketches, and then a full-size drawing; worked out how much should go on each plate, and the best places for the joins; selected models, costumes and accessories. The weather in May 1862 was bad, and for nine consecutive evenings a pony carriage laden with may blossom was brought to the house, and the next morning turned out dull. But on the tenth morning several of the figure negatives were successful, the next three days were dull, but on the fourth the remainder were accomplished. A wooden scaffolding acted as head-rest to the central figures carrying big bundles of may blossom. The principal figure appears twice, for one of the other models was nervous and could not keep still, so the chief model had to pose for her. This picture was issued in two sizes: 40″×15″, and the above, which is Robinson's own print in the original frame.

310. RALPH W. ROBINSON. Son of H. P. Robinson. 1866. Modern copy made from a copy negative by Ralph W. Robinson.

311. SEASCAPE, Scotland. c. 1890. 19¼″×12¼″.
One of the very few of Robinson's straightforward photographs of scenery.

LYDDELL SAWYER, 1856–

'I was born in photography, nursed in it, and have been continually soaked in it ever since. Father, brother, uncles, cousins — all were photographers.' From the age of sixteen Sawyer worked in his father's studio in Newcastle. In his spare time he delighted to make landscape and genre pictures for exhibition.

312. 'IN THE CASTLE GARTH' (Newcastle). 1888. 5¼″×7¼″.

313. 'IN THE TWILIGHT'. 1888. 7¼″×5¼″.

314. 'WAITING FOR THE BOATS'. 1889. 7¼″×5¼″.
Photogravure plates published in *Sun Artists*, 1890. (See No. 455.)

A. G. DEW SMITH

A brilliant amateur portrait photographer living in Cambridge, and active in the 1880's and '90's. He photographed many notabilities of his day.

315. HENRY CHARLES FLEEMING JENKIN, F.R.S. (1833–1885). c. 1885. 11¼″×15″.
Scientist; professor of engineering at London and Edinburgh Universities.

316. WILLIAM ERNEST HENLEY (1849–1903) WITH HIS BUST BY RODIN. c. 1886. 14½″×11¼″.
Poet, critic and dramatist; collaborated with Robert Louis Stevenson.

317. ROBERT LOUIS STEVENSON (1850–1894). c. 1889. 10¼″×13¼″.
Author.

318. EDWARD CLARK. c. 1890. 9½″×12″.

319. G. E. FITZGERALD. c. 1890. 11¼″×14½″.

Nos. 316, 318 and 319 are modern contact prints from the original negatives in the Gernsheim Collection.

FRANK M. SUTCLIFFE, 1859–1940

Son of a water-colour painter. Started as a clerk in a brewery, but later was allowed to take up photography and opened a portrait studio in Whitby, 1875. His real interest lay in landscape and genre photography — 'The pictorial Boswell of Whitby and its neighbourhood' as he used to describe himself.

Sutcliffe's early work was done with wet collodion plates; after 1880 he changed over to gelatine dry plates

In 1923 he became curator of Whitby Museum.

320. 'SUNSHINE AND SHOWER'. c. 1885. 5″×7″.

321. 'WATER RATS'. 1886. 7″×5″.

322. 'EXCITEMENT'. 1888. 7″×5″.
Photogravure plates published in *Sun Artists*, London, 1891. (See also No. 455.)
Though they are carefully posed groups, in these pictures Sutcliffe achieves the naturalness and spontaneity of snapshots.

SIR EMERY WALKER

Founder of a London firm of photographers, engravers and printers.

323. WILLIAM MORRIS (1834–1896). c. 1896. Photogravure 8½″×10½″.
Poet, artist and Socialist.

HENRY WHITE, –1903

A prominent London amateur photographer working with the calotype and wet collodion processes, and one of the earliest artistic landscape photographers. Became a member of the Photographic Society in 1855. He won the highest prizes at the Paris Universal Exhibition, 1855, and the Universal Exhibition of Photography at Brussels, 1856, and was then universally regarded as the finest landscape photographer.

324. A CORNFIELD. Dated August 1856. 9½″×7½″.

325. BRAMBLE AND IVY. c. 1860. 9″×11″.

B. GAY WILKINSON, 1857–

An amateur who learned photography from Col. Joseph Gale (q.v.) about 1878. He specialized in landscape photography, finding his most congenial subjects in out-of-the-way villages, at the seaside, and on the breezy Sussex Downs.

326. 'PRAWNING'. 1889. 5″×7″.

327. 'SAND DUNES'. 1890. 7″×5″.
Photogravure plates published in *Sun Artists*, London, 1891. (See also No. 455.)

DAVID WILKIE WYNFIELD, 1837–1887

A painter, and amateur portrait photographer from about 1860 on. His photographs of artists are of aston-

ishing originality for the period, though the painter's picturesque device of dressing up the sitter is evident. Art critics in 1864 considered that Wynfield's work was the greatest step forward in photographic portraiture since the time of D. O. Hill. The chief characteristic of these portraits, apart from the substitution of Renaissance for modern costume, is the concentration on the head and the exclusion of everything that might detract from its prominence. Mrs. Cameron (q.v.), who took up photography about that time, modelled her portraits of great men on Wynfield's, though, to her credit, instead of adding a fancy costume, she usually covered the modern dress by a black velvet cloth. Wynfield's influence had long been surmised but has only recently been confirmed by the finding of a letter Mrs. Cameron wrote to W. M. Rossetti in 1866 (see No. 471).

328. WILLIAM CALE. c. 1863. 6¼″×8¼″.
UNIDENTIFIED MAN. c. 1863. 6¼″×8¼″.

ANONYMOUS

329. G. REDFORD, J. B. WARING AND R. C. DUDLEY. c. 1855. 7¼″×9¼″.

330. ACHNACARRY CASTLE, SCOTLAND. Dated 1859. 10″×8¼″.

331. DEERSTALKING AT ACHNACARRY: LORD MALMESBURY AND KEEPERS. Dated 1859. 10″×8″.

332. A GENTLEMAN. c. 1858. 5″×6¼″.
MOTHER AND DAUGHTER. c. 1859. 5¼″×6¼″.

333. AN ANCIENT OAK AT HAM COURT. Dated 1860. 11¼″×9¼″.

334. INSTALLATION OF THE EARL OF KIMBERLEY AS LORD-LIEUTENANT OF IRELAND, AT VICEREGAL LODGE, DUBLIN. 1864. 9″×6¼″.

334a. MRS. WILLIAM MORRIS. c. 1864. Modern print from original negative 10″×12″.

335. A CANAL IN VENICE. c. 1865. 13¼″×10¼″.

336. BASILICA DI SAN ANTONIO, PADUA. c. 1865. 13¼″×10¼″.

337. ARTILLERY DRILL. c. 1865. 10¼″×5¼″.

338. ARTILLERY DRILL. c. 1865. 9″×6″.

Nos. 337 and 338 are from an album entitled 'Artillery Drill' containing 120 photographs made by the War Department at the Royal Arsenal, Woolwich, and presented to Prince Arthur (later Duke of Connaught) in November 1867.

339. VIEW AT ILFRACOMBE. c. 1862. 8″×6″.
Ever since the French photographer Gustave le Gray astonished the photographic world with his instantaneous seascapes taken in 1856–57, the production of similar views was the ambition of many amateurs, and 'moonlight' effects like the above remained favourite subjects for several decades.
Enlarged reproduction by H.G. from the original.

THE *CARTE-DE-VISITE* PERIOD

The *carte-de-visite* portrait was introduced into England in 1857 by the London branch of A. Marion & Co., a French firm of photographers, wholesale distributors, and photographic publishers. These little portraits on a mount the size of a visiting card had been invented and patented three years earlier by the Parisian photographer Disderi, but it is doubtful whether they were ever actually used as visiting cards, which appears to have been the inventor's intention.

Carte portraiture was made fashionable in England by J. E. Mayall (q.v.), who in May 1860 took *carte* portraits of the Queen, Prince Albert, and other members of the Royal family. Marion & Co. sold hundreds of thousands of these pictures within a short period, for everyone wanted to possess life-like representations of the universally loved Queen and her family. Their unparalleled success gave great impetus to this new branch of photography through the understandable desire of every photographer to reap an equally rich harvest with portraits of other distinguished persons, who in their turn were only too eager to emulate the Royal family, and to see their portraits exhibited in shop windows alongside those of their Sovereign.

Quite as early in this field as Mayall, if not earlier, was Camille Silvy, a French aristocrat who bought a studio in Porchester Terrace in 1859, and for a few years stooped to the lucrative business of portrait photography. Gifted with exquisite taste and the Frenchman's instinctive understanding of the fair sex, he ran a series of *cartes* entitled 'The Beauties of England', which for some years swamped the market. Within eighteen months of opening his studio, Silvy employed forty men. He disdained the conventional studio 'props' such as balustrades and columns; he posed his sitters gracefully in elegantly furnished interiors or against painted landscapes, and on occasion even had backgrounds specially painted to indicate the status of the sitter (e.g. the Wellington monument for the Duchess of Wellington, and the dome of St. Paul's for the Dean). Silvy was the Winterhalter of photography, and his pictures are the gems of the *carte-de-visite* style.

By 1861 a craze had set in for collecting *cartes* of celebrities, and exchanging portraits with all one's acquaintances. Several million *cartes* were made annually in England; so great, indeed, was the number that more than one Chancellor of the Exchequer is said to have considered following America's example and materially adding to the national income by means of a small tax on these productions.

No Victorian drawing-room was complete without its photograph album. Political and religious convictions, party and piety, found ample scope in the morocco-bound volume. The first few pages were usually devoted to the Royal family, which in the Victorian album did duty as grace before meat. Then followed the public men one admired, and lastly the family circle and friends. So the photograph album at the same time served as an illustrated book of genealogy and expressed a form of hero-worship.

When in time the ordinary photograph album began to pall, the musical album provided a welcome touch of novelty. What could be more charming than to have a musical box concealed in the album, which started to play its tinkling tunes when the book was opened? (See No. 346.)

In 1866, when the popularity of the *carte-de-visite* was beginning to wane slightly, the larger cabinet size portrait was introduced by F. R. Window. Before the end of the century various other types and sizes were introduced, for which a History is a more appropriate place for discussion. Suffice it to mention that *cartes-de-visite* remained in vogue until about 1885, and that the photo-album was an essential drawing-room adjunct until well past the Edwardian era.

Contrary to general belief, the *carte* and cabinet sizes were not reserved exclusively for portraiture but were also used for genre pictures, architectural views and landscapes, and so were in a way forerunners of the photographic picture-postcard, which was introduced in this country by the Rotary Photographic Company in 1900.

340. CARTE-DE-VISITE ALBUM IN BROWN MOROCCO LEATHER. c. 1862. 4¼″×5¼″.
Contains 28 *cartes*.

341. CARTE-DE-VISITE ALBUM IN BROWN MOROCCO LEATHER. c. 1865. 9½″×6″.
Contains 100 *cartes-de-visite* of the Royal family and English politicians collected by the Earl of Kimberley (Lord-Lieutenant of Ireland, Colonial Secretary, and Secretary for India).

342. CARTE-DE-VISITE ALBUM IN RED MOROCCO LEATHER. c. 1865. 5″×6″.
Contains 50 *cartes-de-visite* of the Earl and Countess of Kimberley and their relations and friends.

343. CARTE-DE-VISITE ALBUM IN BROWN MOROCCO LEATHER. c. 1865. 6″×10″.
Contains 84 *cartes-de-visite* of European royalties, and men famous in politics, science and the arts.

344. CARTE-DE-VISITE ALBUM IN DARK GREEN MOROCCO LEATHER WITH 'GOTHIC' ORNAMENTS. c. 1865. 9″×11½″.
Inside covers and pages of crimson watered silk. Contains 80 *cartes*, each one inset in a special white mount with gilt edges.

345. CARTE AND CABINET ALBUM IN BLACK CALF. c. 1870. 10″×13″.
Contains 64 *cartes-de-visite* and 8 cabinet photographs of famous men and fashionable women.

346. MUSICAL ALBUM IN BLUE PLUSH WITH GILT ORNAMENTS, FITTED WITH MUSICAL BOX IN WORKING CONDITION. c. 1875. 9″×11″.
Contains 32 *cartes-de-visite* and cabinet photographs.

347. CABINET ALBUM IN BROWN CALF WITH GILT TOOLING. c. 1880. 6½″×7½″.
Contains 12 cabinet photographs of famous actresses and Society women, a number of them hand-coloured.

348. CARTE AND CABINET ALBUM IN BLACK CALF. c. 1890. 9″×11½″.
Pages elaborately decorated with printed coloured flowers. Unused: spaces for *carte* and cabinet size photographs.

349. FAMILY ALBUM OF LT.-COL. EDMOND WALKER, R.E. c. 1870. 10″×12″. Brown calf.
Decorated throughout with pen drawings of flowers, leaves, landscapes, etc.

350. FAMILY ALBUM OF SIR CHARLES RUGGE PRICE. c. 1875. 10″×12″. Half calf.
Decorated throughout with hand-painted flowers, birds, and other designs.

351. FAMILY ALBUM OF THE MARQUESS OF AILESBURY. c. 1875. 9½″×11½″. Brown morocco.
Decorated throughout with drawings of sporting activities such as hunting, rowing, cricket, football, croquet.

352. ALBUM IN DARK RED MOROCCO LEATHER WITH GILT TOOLING. 1882. 9½″×11½″.
Illuminated frontispiece 'Presented to Henry Cox by Rose Godfrey Johnson', dated 22nd April 1882. Each page is richly ornamented with a floral design drawn by R.G.J. according to H.C.'s wishes, which are written on inserted slips.

Album Nos. 349–352 are interesting examples of Victorian taste and amateur skill in decoration. The pen drawings and paintings were usually executed by the ladies of the family.

LOOSE *CARTES-DE-VISITE* AND CABINET PHOTOGRAPHS, ETC.

353. QUEEN VICTORIA AND THE PRINCE CONSORT March 1861. By J. E. Mayall (signed). Coloured *carte-de-visite* contained in a morocco leather *carte-de-visite* case.

353a. A GOLD PENDANT ⅝″×1⅛″ with drop pearl, surmounted by the crown, containing a photograph of Prince Albert, ½″×⅜″, in a blue enamel frame. On the back is engraved 'To the Marchioness of Ely, in remembrance of the best and greatest of Princes, from his broken-hearted widow Victoria R. Dec. 1861.' (Prince Albert died on 13th December.)

354. COMPOSITE GROUP OF THE WHOLE ROYAL FAMILY, 1861. *Carte-de-visite* by J. E. Mayall.

355. FOUR CARTES-DE-VISITE showing unusual photographers' trade designs on back.

356. PHOTOGRAPHIC 'MOSAIC' OF 29 BISHOPS AND DEANS. 1863. By Ashford Brothers.

357. SIX DIFFERENT PICTURES OF A FAMILY GROUP ON ONE CARTE. Dated 1863. By William Carrick, a Scottish photographer with a studio in St. Petersburg. This is an astonishing picture for the period, giving the effect of cinematographic action. It is not a 'mosaic' but all the pictures were taken on the same plate, which was moved slightly for each exposure.

358. A 'DIAMOND CAMEO' PORTRAIT, giving four different views of the sitter, arranged in diamond-shape. Introduced by F. R. Window in 1864.

359. TWELVE CARTES by Camille Silvy: Lady Dorothy Neville, Lady Leicester, Miss Susie Forster, Duchess of Manchester, Duchess of Wellington, Dean of St. Paul's, Mrs. Botfield, Bishop of Durham, Duchess of Teck, three unidentified ladies.

359a. AN ASSORTMENT OF TWELVE CARTES OF PORTRAITS, VIEWS, AND GENRE SCENES. By Antoine Claudet, Francis Bedford, etc.

360. AN ASSORTMENT OF SIX CABINET PHOTOGRAPHS.

361. ILLUMINATED GREETINGS TOKEN 13¾″×9½″ 'From C.H.A. to A.M.R.' with two photographic portraits c. 1866 inset (size 1¾″×1¼″ and 1¼″×2¼″) in the monograms. From Viscountess Cowdray's library.

362. PHOTO-MONTAGE. c. 1869. 8″×10¾″. Photographs, of slightly varying dates, have been cut out from *carte-de-visite* pictures and arranged against a painted background. The lady in the centre is partly photographic, partly painted. The artists John Heartfield and George Grosz 're-invented' and popularised this method in 1915.

363. PHOTO-MONTAGE dated 17th July 1872. 8″×6½″. The figures are displayed rather surrealistically on a photograph of the Giant's Causeway, Ireland.

364. GREEN MOROCCO LEATHER FAN, 10½″×7½″, embossed with gilt decorations, with ivory handle. Made by W. & J. Milne, Princes Street, Edinburgh. Inset are three *cartes* of a family, by W. E. Kilburn, c. 1862.

365. PINCHBECK MINIATURE FAN, 1¾″ long, consisting of six separate 'leaves'. Each leaf has on each side a miniature portrait ¾″ oval. Subjects include the Princess of Wales, Emperor Francis Joseph, and others. c. 1863.

366. FOUR ILLUMINATED PAGES, 8½″×11½″, from an album c. 1872.

367. PORTRAIT OF A LADY ON PORCELAIN. c. 1887. 7″×9″.

368. TINTYPE OF A LADY AND GENTLEMAN, c. 1884. 2½″×3″.
Tintypes are collodion positives on black lacquered tin — a cheap relation of the ambrotype, popular in the United States from about 1860 and practised in England chiefly by itinerant photographers at seaside resorts from about 1880 on.

369. TWO EARLY PHOTOGRAPHIC POSTCARDS OF THE PRINCE AND PRINCESS OF WALES (King George V and Queen Mary) c. 1902. 1½″×5½″.
By the Rotary Photographic Co.; the first to issue photographic postcards in Britain in 1900.

370. TWO PRIZE MEDALS OF THE PHOTOGRAPHIC SOCIETY OF LONDON (now the Royal Photographic Society of Great Britain) awarded to Henry Stevens. The front shows portrait of Prince Albert, patron of the Society; the verso design is Apollo's sun-chariot with the inscription 'Photographic Society of London, 1853'. This is the date of the foundation of the Society — the oldest photographic society in the world. The medals are of bronze, diameter 2½″, and were struck by W. J. Taylor, London.

STEREOSCOPIC PHOTOGRAPHS

(See also under Daguerreotypes and Victorian Domestic and Street Life)

Sir Charles Wheatstone, the inventor of the stereoscope, was the first to avail himself of the earliest attempts of photography, to obtain pictures for his instrument. Two photographers, Henry Collen and Antoine Claudet, furnished stereoscopic photographs taken by the calotype and daguerreotype processes respectively in 1841 and 1842. Partly due to these photographers' insufficient knowledge of stereoscopic science at that date, and partly due to the fact that the shininess of the daguerreotype rendered it unsuitable for Wheatstone's reflecting stereoscope, the instrument did not find the favour which was afterwards accorded to Sir David Brewster's improved (lenticular) stereoscope.

Brewster's instrument, invented in 1849, admitted light only from one direction, and so was particularly well adapted for viewing daguerreotypes. From that moment photo-

graphers — foremost among them Claudet (see Nos. 24–26) — turned their attention to the application of photography to the stereoscope, and when the collodion process had established itself, stereoscopic photography, like photography in general, received a tremendous impetus and Brewster's instrument became a most popular and inexhaustible source of enjoyment and soon found a place in every drawing-room, for it provided 'refined amusement combined with useful instruction' — the criterion of Victorian recreation. It was regarded as "the optical wonder of the age', for the small slides with their double pictures presented an appearance of astonishing reality and solidity when viewed in the instrument. (See Nos. 500–503)

In 1854 the Stereoscopic Company was established in London for the manufacture and sale of the lenticular stereoscope, and for the production of binocular pictures for educational and recreational purposes. Two years later the stereoscope was in use in all parts of the world, and it was then estimated that the London Stereoscopic Company alone had already sold half a million instruments. The stereoscope not only went to all corners of the world, it also brought the corners of the world to the Victorian fireside. It was, as Claudet wrote,

> the general panorama of the world. It brings to us in the cheapest and most portable form, not only the pictures, but the model, in a tangible shape, of all that exists in the various countries of the globe; it introduces to us scenes known only from the imperfect relations of travellers, it leads us before the ruins of antique architecture, and illustrating the historical records of former and lost civilizations, the genius, taste and power of past ages, with which we have become as familiarised as if we had visited them. By our fireside we have the advantage of examining them, without being exposed to the fatigue, privation, and risks of the daring and enterprising artists who, for our gratification and instruction, have traversed lands and seas, crossed rivers and valleys, ascended rocks and mountains with their heavy and cumbrous photographic baggage.

By about 1870 the craze for stereoscopic pictures, with which the whole country was seized, had subsided, but interest was revived to a certain extent twenty years later.

W. I. CHADWICK

Responsible for the revival of interest in stereoscopy about 1890. Author of *The Stereoscopic Manual*, 1890.

371. WINDSOR CASTLE FROM ACROSS THE THAMES. c. 1890. Collodion positive on glass.

WARREN DE LA RUE, F.R.S., 1815–1889

One of the earliest and most eminent astronomical photographers; President of the Royal Astronomical Society and of the Chemical Society.

372. THE MOON. 1857.
Collodion positive on glass. The stereoscopic effect was achieved by taking the two pictures at different periods of the moon's libration. This picture was regarded by Sir John Herschel as 'the crowning triumph' of the stereoscope.

WILLIAM ENGLAND, –1896

373. INTERIOR OF THE INTERNATIONAL EXHIBITION, LONDON, 1862.
Paper print.

PETER WICKENS FRY, –1860 (attributed to)

Peter W. Fry was among the earliest collodion workers and the only one to exhibit collodion photographs at the Great Exhibition. This may, therefore, be the earliest extant picture by this process.

374. INTERIOR OF THE GREAT EXHIBITION 1851.
Autumn, 1851.
Collodion positive on glass. Probably taken after the close of the Exhibition.

EADWEARD MUYBRIDGE, 1830–1904

375. THE CENTRAL PACIFIC RAILROAD. c. 1870.
Paper print.

ANONYMOUS

376. BALLROOM SCENE (see No. 381). c. 1854.
Paper print sandwiched between two glass plates.

MICROPHOTOGRAPHS

The first microphotographs were made by John Benjamin Dancer (1812–1887) a Manchester photographer, in May 1853. Although quite a number were produced by Dancer and others, the fashion for them only arose in 1859 when newspapers went into ecstasies about this new triumph in photography. The photographs are so minute that they can only be seen by means of a powerful microscope. They are not direct photographs, but the process consists in making a tiny positive by copying a negative through a 1-inch microscopical objective, in a microscope. A special structureless collodion had to be used to give grainless magnified images.

Articles of jewellery — rings, brooches,

tie-pins, were decorated with microphotographs. Queen Victoria wore a signet ring enclosing a group of five portraits of her family, measuring $\frac{1}{8}$". Though these productions can really only be regarded as toys — and as such they are still sometimes made today in penholders with a small magnifying lens — the idea was put to practical use during the siege of Paris, 1870–71. Messages were sent in a form of microphotographs attached to carrier-pigeons' wings, and on arrival were projected and copied. A recent application was the airgraph letters during the war, and the microfilming of documents. For spies the microphotograph has, of course, remained a most valuable tool.

377. A SELECTION OF 12 MICROPHOTOGRAPHS, $\frac{1}{16}$", mounted on microscope glass slides. c. 1860.
The initials J.B.D. stand for John Benjamin Dancer, A.R. for Alfred Rosling, and H.W. for Herbert Watkins, the leading microphotographers.

The Creed, containing 484 letters, by J.B.D.

The Ten Commandments, containing 1,243 letters, by J.B.D.

A page of *The Times* (not signed).

Lord Palmerston, from life, by A.R.

Lt.-Col. Sir Colin Campbell, from life, by H.W.

John Bright, M.P., from life (not signed).

Jenny Lind, from a photograph by W. E. Kilburn, made by J.B.D.

Prince Frederick William of Prussia, taken at the time of his marriage to the Princess Royal of England, 1858 (not signed).

Empress Eugenie (not signed).

Photographic mosaic of 155 eminent persons, by J.B.D.

Photographic mosaic of 85 portraits of the Kings and Queens of England, from the Conquest to Queen Victoria, by A.R.

State visit of Napoleon III and Empress Eugenie with Queen Victoria and Prince Albert to the Royal Italian Opera, London, on 19th April 1855 (from a painting) by A.R.

VICTORIAN DOMESTIC AND STREET LIFE

The inability of the daguerreotype and calotype processes to record action was very disconcerting to early photographers. Until about 1855 they had to confine themselves almost exclusively to portraits, architectural views, and landscapes — subjects which the new art could represent much more quickly and cheaply than the old arts. To attempt to record moving objects with slow negative materials and cumbersome apparatus was out of the question.

Following the introduction of the stereoscopic camera, taking comparatively small photographs, and further improvements in the wet collodion process, exposures were reduced drastically from minutes to seconds. By about 1855 it was possible to increase the range of subjects to include street life and domestic scenes but, unfortunately for posterity, very few photographers worked in these extended fields. The amateurs all aimed at High Art, whilst the professionals found portraiture more profitable.

Although the great majority of interior scenes such as the ballroom (No. 381) or the wedding (No. 386) had to be staged, their value as social documents is in no way decreased since they are contemporary and made for a critical public which would have scorned anything but a true-to-life picture.

In the mid-seventies two author/photographers, J. Thomson and Adolphe Smith, produced a most valuable documentation of the life and work of the poorer classes (Nos. 401–409), a kind of sequel to Henry Mayhew's important survey *London Labour and the London Poor* which had appeared twenty-five years previously and was illustrated largely with engravings copied from daguerreotypes.

The popularization of the dry plate about 1880, and still more the advent of the Kodak roll-film camera and other hand cameras, permitting a large number of exposures to be made in quick succession, allowed much greater freedom of movement to the photographer and at last made possible really instantaneous pictures (Nos. 411, 412, 419).

378. THE GEOGRAPHY LESSON. c. 1850.
Stereoscopic daguerreotype by A. Claudet (for original see No. 25).

379. RECREATION AT HOME. c. 1856.
Stereoscopic picture.

380. THE MUSIC LESSON. c. 1857.
Stereoscopic picture.

381. AT THE BALL. c. 1854.
Stereoscopic picture.

382. AFTER THE BALL. c. 1857.
Stereoscopic picture.

382a. THE GHOST. c. 1858.
Stereoscopic picture.

383. AN AWKWARD MOMENT. c. 1857.
Stereoscopic picture.

384. PARTIE DE CAMPAGNE. c. 1859.
Stereoscopic picture.

385. THE PROPOSAL. c. 1857.
Stereoscopic picture.

386. THE WEDDING. c. 1857.
Stereoscopic picture.

387. THE HONEYMOON. c. 1857.
Stereoscopic picture.

388. THE NURSERY. c. 1857.
Stereoscopic picture by James Elliott.

388a. GRANDMOTHER AND CHILD. c. 1863. *Carte-de-visite.*

389. PRINCES STREET, EDINBURGH. 1859.
Stereoscopic picture by G. W. Wilson.

390. CROSSING SWEEPER. c. 1860. 6″×8″.
By O. G. Rejlander.

391. 'SIX TIMES FOR A HA'PENNY'. c. 1860. 6½″×8½″.
By O. G. Rejlander.

392. 'HAVE A TUNE, MISS?' c. 1860. 5½″×7½″.
By O. G. Rejlander.

393. STREET URCHINS. c. 1860. 5½″×7½″.
By O. G. Rejlander.

394. MARGATE BEACH. c. 1857.
Stereoscopic picture.

395. WARMWELL HOUSE. Dated 1863. 8″×6″.

396. CHURCH BAZAAR. c. 1862. 4½″×4½″.

397. LADY AND PAGE. c. 1869. *Carte-de-visite.*

398. A DAY IN THE COUNTRY. c. 1867.
Stereoscopic picture.

398a. 'CROSSING THE LINE'. c. 1860. 4½″×6.

399. BOY WITH PARROTS. c. 1865. 4½″×6½″.
By Edward Draper.

400. COACHING. c. 1870. *Carte-de-visite.*

401. HANSOM CAB. 1876. 3½″×4½″.
By J. Thomson and Adolphe Smith.

402. OLD CLOTHES SHOP. 1876. 3½″×4½″.
By J. Thomson and Adolphe Smith.

403. STREET MUSICIANS. 1876. 4½″×3½″.
By J. Thomson and Adolphe Smith.

404. OUTSIDE THE PUB. 1876. 3½″×4½″.
By J. Thomson and Adolphe Smith.

405. 'HA'PENNY ICES'. 1876. 4½″×3½″.
By J. Thomson and Adolphe Smith.

406. RECRUITING SERGEANTS. 1876. 3½″×4½″.
By J. Thomson and Adolphe Smith.

407. POOR WOMAN WITH BABY. 1876. 3½″×4½″.
By J. Thomson and Adolphe Smith.

408. STREET PHOTOGRAPHER. 1876. 4½″×3½″.
By J. Thomson and Adolphe Smith.

409. SHOE-SHINE. 1876. 3½″×4½″.
By J. Thomson and Adolphe Smith.

410. RESTING AFTER TENNIS. c. 1876. 5″×4″.

410a. PLEASURES OF TRAVEL IN MEXICO. c. 1880. 8″×6″.

411. RIDING IN THE PARK. 1883. Photogravure 3½″×4½″.

412. YARMOUTH BEACH. c. 1884. 7½″×4½″.
By B. J. Edwards.

413. TRICYCLING. c. 1884. Ambrotype 2½″×3½″.

414. CAMPING BY THE THAMES. 1885. 4½″×3½″.
By William Taunt.

415. TOURISTS ON THE MER DE GLACE, CHAMONIX. c. 1885. *Carte-de-visite.*

416. 'HOMAGE TO QUEEN VICTORIA'. January 1888. 11″×9.
Tableau vivant at Osborne, by Hughes & Mullins.

417. FAMILY GROUP. 1889. 7½″×5″

418. EXHIBITION OF PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN. 1891. 8″×5″.

419. LADIES' HOCKEY. c. 1900. 5½″×3″.

Reproductions by H.G. from stereoscopic photographs and others too small for exhibition, or contained in books and albums.

PHOTOGRAPHICALLY - ILLUSTRATED BOOKS ETC.

Before the birth of photography, books were illustrated with engravings, woodcuts, or lithographs. Photography first made possible the wide distribution of faithful representations, and the public was eager to possess photogenic drawings or 'sun pictures' of buildings and scenery which they so far knew only from travellers' descriptions or fictitious engravings. The first book with illustrations based on the new art — *Paris et ses Environs reproduits par le Daguerreotype* — appeared in France in 1840. Owing, however, to the impossibility of reproducing daguerreotypes, it consisted of lithographic plates copied from them. In other words, the artist's pencil and imagination could still tamper with the original photographic illustration in the process of copying it for publication.

It was W. H. Fox Talbot who first used actual photographs for book illustration, and he introduced *The Pencil of Nature* (No. 420) with these words:

> The little work now presented to the public is the first attempt to publish a series of plates or pictures wholly executed by the new art of Photogenic Drawing, without any aid whatever from the artist's pencil. . . . The plates of this work have been obtained by the mere action of light upon sensitive paper. They have been formed or depicted by optical and chemical means

alone, and without the aid of anyone acquainted with the art of drawing. It is needless, therefore, to say that they differ in all respects and as widely as possible in their origin from plates of the ordinary kind, which owe their existence to the united skill of the artist and the engraver.

Though Fox Talbot followed up his first attempt with another photographically- illustrated book, *Sun Pictures in Scotland* (1845), the want of knowledge of how to prevent the gradual fading of photographic paper prints — and Talbot's prints were bad examples of fading — discouraged other publishers from similar ventures for many years, with a few exceptions in which Talbot's photographic establishment supplied the prints for limited editions. In the mid-fifties more durable processes for positive prints were introduced — albumen and silver prints — and in the period up to 1875 about 350 expensive books were published with original photographs glued in between the text.

After about 1870 original photographs were largely replaced by the so-called permanent photographic printing processes (Woodburytype, carbon prints) or other photo-mechanical processes such as heliotypes. Half-tone reproduction, introduced in 1883 as a novelty in book and magazine illustration, did not come into general use until after 1890.

420. THE PENCIL OF NATURE by W. H. Fox Talbot. London, 1844–46. Published in six parts containing a total of 24 photographs. The first photographically-illustrated book in the world. (Part I was published 29th June 1844).

421. EXHIBITION OF THE WORKS OF INDUSTRY OF ALL NATIONS, 1851. REPORTS BY THE JURIES. London, 1852. Four volumes illustrated with 155 photographs by Nicholaas Henneman, Hugh Owen and A. Ferrier. Only about fifty presentation copies were illustrated with photographs. Each has a printed presentation page bearing the name of the recipient. This copy was presented to Thomas Bazley, M.P., one of the Commissioners of the Great Exhibition.

422. ILLUSTRATIONS OF SCRIPTURE BY AN ANIMAL PAINTER [Mrs. J. Blackburn] WITH NOTES BY A NATURALIST [J. Wilson]. Edinburgh, 1854. Illustrated with 20 photographs.

423. A REMINISCENCE OF KENILWORTH CASTLE. AMY ROBSART TO LORD LEICESTER. A six-page song with words and music by Mrs. Pitt-Draffen. [London, c. 1855.] Illustrated with a photograph of Kenilworth Castle.

424. NOTICES OF SCULPTURE IN IVORY by M. Digby Wyatt. London, 1856. Illustrated with 9 photographs by J. A. Spencer.

425. PHOTOGRAPHIC PORTRAITS OF LIVING CELEBRITIES. NO. 1 PROFESSOR OWEN. Biographical notice of Sir Richard Owen by Herbert Fry, illustrated with a portrait by Maull & Polyblank. London, 1856. The first publication of its kind, which started an avalanche of similar publications.

426. THE TESTIMONY OF THE ROCKS by Hugh Miller. 1st edition, Edinburgh, 1857. The first book illustrated with a photographic frontispiece portrait.

427. DORSETSHIRE PHOTOGRAPHICALLY ILLUSTRATED by John Pouncy. London and Dorchester, 1857. Four Parts in two Volumes. 80 plates. 'The detail and touch of Nature faithfully reproduced by a new process on stone, by which views are rendered truthful, artistic and durable.' This is the first British work with photolithographic illustrations.

428. TENERIFFE: AN ASTRONOMER'S EXPERIMENT by C. Piazzi Smyth. London, 1858. Illustrated with 20 stereoscopic photographs by the author. The first book illustrated in this way.

429. EGYPT AND PALESTINE PHOTOGRAPHED AND DESCRIBED BY FRANCIS FRITH. 1st edition, London, 1858–59. Two volumes, containing a total of 76 photographs.

430. THE STEREOSCOPIC MAGAZINE, a *Gallery of Landscape, Scenery, Architecture, Antiquities, and Natural History, accompanied with descriptive articles by writers of eminence.* Issued in monthly parts, each illustrated with 3 stereoscopic photographs by leading photographers, and in particular Roger Fenton. Exhibited is the first number, published 1st July 1858. The only periodical illustrated in this way.

431. VACATION LETTERS: SECOND SERIES, 1858 by Henry Sutton Noblett. Manuscript of a continental tour, illustrated with 14 photographs by the author.

432. SOME ACCOUNT OF THE WOODCARVINGS OF ST. MICHAEL'S CHURCH, CORNHILL by George Alfred Rogers. London [1860]. Illustrated with 93 photographs.

433. THE CONWAY IN THE STEREOSCOPE by James B. Davidson. London, 1860. Illustrated with 20 stereoscopic photographs by Roger Fenton. This is the third book illustrated with stereoscopic photographs.

434. SUNSHINE IN THE COUNTRY: A BOOK OF RURAL POETRY. London, 1861. Illustrated with 20 photographs by W. M. Grundy.

435. RUINED ABBEYS AND CASTLES OF GREAT BRITAIN AND IRELAND by William and Mary Howitt. London, Vol. I 1862, Vol. II 1864. Containing a total of 53 photographs by Dr. Hemphill, Thomas Ogle, Russell Sedgfield, J. Thompson, Roger Fenton and others.

436. THE LADY OF THE LAKE by Sir Walter Scott. London, 1863. Illustrated with 14 photographs by Thomas Ogle and G. W. Wilson.

437. OUR ENGLISH LAKES, MOUNTAINS AND WATERFALLS AS SEEN BY WILLIAM WORDSWORTH. London, 1864. Illustrated with 13 photographs by Thomas Ogle.

438. AUCTION CATALOGUE of Messrs. Christie, Manson & Woods. London, April 1864. Illustrated with 43 photographs by Stephen Ayling.

439. HYPERION: A ROMANCE by H. W. Longfellow. London, 1865. Illustrated with 24 photographs by Francis Frith.

440. THE OBERLAND AND ITS GLACIERS EXPLORED AND ILLUSTRATED WITH ICE-AXE AND CAMERA by W. B. George. London, 1866. Illustrated with 28 photographs by Ernest Edwards.

441. PHOTOGRAPHS OF KILLARNEY, WITH DESCRIPTIVE LETTERPRESS. Glasgow, 1867. Illustrated with 12 photographs by John Hudson.

442. PHOTOGRAPHS OF ENGLISH AND SCOTTISH SCENERY: THE CALEDONIAN CANAL by G. W. Wilson. London 1867. Illustrated with 12 photographs by the author.

443. LEAVES FROM A JOURNAL OF OUR LIFE IN THE HIGHLANDS FROM 1848 TO 1861 by Queen Victoria. Edited by Arthur Helps. London, 1868. Illustrated with 42 photographs.

444. DUDLEY, ILLUSTRATED BY PHOTOGRAPHS. Dudley, 1868. 22 photographs.

445. PICTURESQUE BITS FROM OLD EDINBURGH by Thomas Henderson. Edinburgh, 1868. Illustrated with 15 photographs by Archibald Burns.

446. A NEW MAP OF THE RIVER THAMES FROM OXFORD TO LONDON by Henry W. Taunt. Oxford, 1873. Illustrated with 80 photographs by the author. The first photographically-illustrated guidebook.

447. ALFRED TENNYSON'S 'IDYLLS OF THE KING' AND OTHER POEMS, ILLUSTRATED BY JULIA MARGARET CAMERON. London, 1875. Two volumes each containing 12 photographs and a photographic frontispiece of Tennyson.

448. ILLUSTRATIONS BY JULIA MARGARET CAMERON OF ALFRED TENNYSON'S 'IDYLLS OF THE KING' AND OTHER POEMS. Miniature edition [London, 1875] containing 23 photographs. The only copy known.

449. VOYAGE TO THE POLAR SEA IN H.M. SHIPS 'ALERT' AND 'DISCOVERY' by Sir G. S. Nares. London, 1878. Two volumes illustrated with a total of six Woodburytypes by F. Mitchell and George White.

450. THE SHEPHERD'S TOWER. *A Series of Photographs of the Sculptures of Giotto's Tower, to illustrate Part VI of 'Mornings in Florence'* by John Ruskin. 1st edition, London, 1881. In the separate text, Ruskin refers on p. 182 to these 20 photographs as 'my series of photographs'.

451. A BROADSHEET by Sir Francis Galton, F.R.S., illustrated with a composite portrait of six members of the same family. London, March 1882.

452. LIFE AND LANDSCAPE OF THE NORFOLK BROADS by P. H. Emerson and T. F. Goodall. London, 1886. Limited edition of 100 copies. Illustrated with 40 photographs by the authors.

453. THE POETICAL WORKS OF HENRY W. LONGFELLOW. London, 1889. Illustrated with 7 photographs by Payne Jennings.

454. A TREATISE ON MAGNESIUM FLASHLIGHT PHOTOGRAPHY by Robert Slingsby. London, 1890. Illustrated with four Woodburytypes by the author.

455. SUN ARTISTS, edited by W. Arthur Boord. London, 1891. Limited de luxe edition of 100 copies. A symposium of eight well-known photographers, each represented by four signed photogravure plates.

456. PHOTOGRAPHIC PLEASURES POPULARLY PORTRAYED BY PEN AND PENCIL by 'Cuthbert Bede' (the Rev. Edward Bradley). 1st edition, London, 1855. The first book caricaturing photography.

MILESTONES IN THE EVOLUTION OF PHOTOGRAPHY

PRE-PHOTOGRAPHY: OPTICS AND CHEMISTRY

457. GIOVANNI BAPTISTA PORTA. *Magiae Naturalis* in four books, Cologne, 1562. (First edition Naples, 1558.) Although the principle of the camera obscura appears to have been known to Roger Bacon (*Perspectiva*, c. 1267), is described by Leonardo da Vinci in the *Codex Atlanticus* c. 1500, and was used by various scientists for the observation of eclipses of the sun 'without danger to the eyes', Porta was the first to publish a clear and full description of it in his *Magiae Naturalis* (Book IV, Chapter II). For this reason he has often mistakenly been credited with its invention.
A camera obscura at that time was literally a dark room in a house, with a tiny opening in the window shutter by means of which the street or landscape outside could be observed on the opposite wall of the room, or on a white screen.

458. DANIEL BARBARO. *La Pratica della Perspettiva*. Venice, 1569. (Reprint of the first edition of 1568). Barbaro gives in Chapter V, p. 192, the first description of the camera obscura with a convex lens, and makes the first mention of a diaphragm to sharpen the image. This is a great improvement on Porta and an important step nearer the photographic camera.

459. ATHANASIUS KIRCHER. *Ars Magna Lucis et Umbrae*. First edition, Rome, 1646. Plate 28 illustrates a camera obscura set up in the open air with the object of facilitating the drawing and painting of landscapes. This book also contains the first published description of the magic lantern — a milestone in the evolution of cinematography.

460. JOHANN ZAHN. *Oculus Artificialis Teledioptricus*. First edition, Wurzburg, 1685–86. Zahn was the first person to illustrate and describe in great detail (*Fundamentum I*, p. 176–188 and *Fundamentum III*, p. 219) the portable camera obscura and the reflex camera obscura with lens, the direct forerunners of the box type hand-camera and reflex camera.

461. JOHANN HEINRICH SCHULZE. *Scotophorus pro Phosphoro Inventus.* Nurnberg, 1727. Acta Physico-Medica Academiae Caesareae, Vol. I, p. 528. Gives the first description of producing images by the action of light on a solution of nitrate of silver (in a glass bottle).

462. THOMAS WEDGWOOD AND SIR HUMPHREY DAVY. 'An account of a method of copying paintings upon glass and of making profiles by the agency of light upon nitrate of silver.' Extract from Nicholson's *Journal of Natural Philosophy*, Vol. III, p. 167, London, 1802 (a reprint of Wedgwood's and Davy's paper which was first published in the Journal of the Royal Institution, Vol I, June, 1802). This is the first account of making images by the action of light on nitrate of silver coated on paper or white leather. But for the fact that they could not fix the images, Wedgwood and Davy would have preceded Fox Talbot in producing photogenic drawings. They also attempted the production of pictures in the camera obscura.

463. Reduced facsimile of PARTNERSHIP AGREEMENT BETWEEN JOSEPH NICEPHORE NIEPCE AND L. J. M. DAGUERRE, dated 14th December 1829. (From *The Photogram*, February 1900). Since 1816 Niepce had been experimenting with various methods of producing pictures by the agency of light and had succeeded in making several 'heliographs' of nature in the camera obscura, of which unfortunately none are extant. These must be counted as the first photographs. Daguerre had been working towards the same end since 1825 without, however, succeeding in producing a single picture until after the death of his partner Niepce in 1833. Since there is no contemporary publication by Nicephore Niepce, his important pioneer work tends to be overshadowed by Daguerre's.

THE FIRST MAIN PERIOD OF PHOTOGRAPHY

464. W. H. FOX TALBOT. 'Some account of the art of Photogenic Drawing, or the process by which natural objects may be made to delineate themselves without the aid of the artist's pencil.' *The London & Edinburgh Philosophical Magazine*, Vol. XIV, March 1839, p. 196 208, contains Fox Talbot's paper read before the Royal Society on 31st January 1839. It describes the first successful photographic process on paper. The earliest surviving paper photograph, taken by the inventor in 1835, is at the Science Museum, London.

465. L. J. M. DAGUERRE. *Historique et description des procedes du Daguerreotype et du Diorama.* Paris, 1839. This is the second edition of Daguerre's manual, published by Alphonse Giroux on 28th September 1839. Daguerres' manual is the first instruction book on the daguerreotype process, i.e. making photographic pictures on metal. The earliest surviving daguerreotype was taken by the inventor in 1837. It is at the Societe Francaise de Photographie, Paris.

THE SECOND MAIN PERIOD OF PHOTOGRAPHY

466. FREDERICK SCOTT ARCHER. 'On the use of collodion in photography.' *The Chemist*, New Series, Vol II, March 1851. The first publication of the collodion process, which eventually completely superseded the daguerreotype and calotype processes, and heralded the collodion or wet plate period, which lasted until about 1880. The earliest surviving collodion photograph is exhibited as No. 374.

THE THIRD MAIN PERIOD OF PHOTOGRAPHY

467. PORTRAIT OF DR. RICHARD LEACH MADDOX, inventor of the first practicable gelatine/silver bromide emulsion, which ushered in the period of dry plates still in use. He announced the preparation of the emulsion in a letter to the *British Journal of Photography*, London, 8th September 1871.

468. FIRST ADVERTISEMENT OF THE 'KODAK' to appear in a British paper (*The Photographic Journal*, 29th September 1888). In 1888 the American George Eastman placed on the market a box camera using stripping film on a paper roll on which one hundred pictures could be taken. This marks the beginning of the last stage of Victorian photography — amateur snapshooting. The following year Eastman introduced a flexible transparent roll-film made of nitrocellulose. This is the kind of film still used in photography and cinematography. In 1914 its invention was finally credited by the United States Court of Appeal to the Rev. Hannibal Goodwin of Newark, U.S.A., after twenty-five years' litigation, but its introduction and mass-production, which completely revolutionized photography, are due to the Eastman Kodak Company in 1889.

AUTOGRAPH LETTERS AND MSS.

CAPTAIN (LATER REAR-ADMIRAL SIR) FRANCIS BEAUFORT, 1774–1857

Captain Beaufort was the first person to give the news of Daguerre's discovery to Sir John Herschel, in a note dated 23rd January 1839, and this started Herschel, Robert Hunt and several other scientists on their photographic experiments.

469. TWO-PAGE HOLOGRAPH LETTER dated 2nd May 1840 to Robert Hunt, F.R.S. Captain Beaufort mentions that Herschel referred him to Hunt as having 'so successfully conquered the difficulty of the reversed lights and shades'. He says he would like to have information regarding this process of photography (photogenic drawing) for his nephew

who resides in India, and asks Hunt to let him have some of his prepared paper, the materials requisite for the preparation, a description of his method of preparing the paper, in fact, full instructions as to apparatus, etc.

SIR DAVID BREWSTER, F.R.S., 1781–1868

Scientist. Inventor of the lenticular stereoscope, 'the optical wonder of the age', and father of stereoscopic photography.

470. TWO-PAGE HOLOGRAPH LETTER dated 30th May 1854 to James Nasmyth.

JULIA MARGARET CAMERON, 1815–1879

Famous amateur photographer.

471. ELEVEN-PAGE HOLOGRAPH LETTER dated 23rd January 1866 to William Michael Rossetti. She writes of two photographs of W. M. Rossetti just done, as her best portraits ever, refers to her exhibition at Colnaghi's, and Dante Gabriel Rossetti's visit to it, and asks W. M. Rossetti to do all he can to give her publicity, and to persuade D. G. Rossetti to do the same. Most interesting of all, Mrs. Cameron acknowledges David Wilkie Wynfield's (No. 328) artistic influence, saying 'To his beautiful photography I owed *all* my attempts and indeed consequently all my success.'

LEWIS CARROLL, 1832–1898

Author of *Alice in Wonderland*, and an ardent amateur photographer.

472. TWELVE-PAGE HOLOGRAPH LETTER to his sister Louisa dated 3rd August 1864. The first part is about his visit to Mrs Cameron, when they showed each other their photographs. Lewis Carroll is rather severe on Mrs. Cameron, who had only just taken up photography. 'Hers are all taken purposely out of focus — some are very picturesque — some merely hideous — however, she talks of them as if they were triumphs in art.' The second part of the letter is about Freshwater, and family matters, into which his photography, and the Rectory album, enter once more.

L. J. M. DAGUERRE, 1789–1851

Inventor of the Diorama, and of the photographic process on metal which bears his name.

473. ONE-PAGE HOLOGRAPH LETTER dated 1st July 1839 to M. Degnacq, inviting him to a discussion at Daguerre's house on the winding up of the Societe du Diorama necessitated by the destruction of the Diorama by fire on 3rd March.

P. H. EMERSON, 1856–1936

Doctor, author, and famous amateur photographer.

474. ONE-PAGE HOLOGRAPH LETTER dated 27th March 1923 to J. W. Philipson, about some of his books.

SIR JOHN F. W. HERSCHEL, F.R.S., 1792–1871

Astronomer, and a leading photographic scientist in the early days of the invention. Produced a photograph on glass in February 1839. Coined the words 'photography' and 'snapshot', and was the first to apply the terms 'positive', 'negative', and 'emulsion' to photography.

475. THREE-PAGE HOLOGRAPH LETTER dated 2nd April 1847 to Sir William White Cooper.

ROBERT HUNT, F.R.S., 1807–1887

Mineralogist, and one of the leading photographic scientists in the nineteenth century. Wrote the first general treatise on photography, 1841. Inventor of several photographic processes.

476. ONE-PAGE HOLOGRAPH LETTER dated 30th May 1873 to John Spiller.

JOHN EDWIN MAYALL, 1810–1901

An early daguerreotypist and, during the *carte-de-visite* period, the leading professional photographer in Britain. Made famous and rich by his series of *carte* portraits of the Royal family.

477. FOUR-PAGE HOLOGRAPH LETTER dated 20th November 1875 to John Spiller.

G. BERNARD SHAW, 1856–1950

Shaw was an amateur photographer from 1898 on. In 1949 Helmut Gernsheim put twelve questions to Shaw regarding his photography, each on a separate strip of paper in accordance with instructions received. The answers, in Shaw's hand, reveal for the first time details about his photographic activity and his early ambition 'to be a Michael Angelo, not a Shakespear'. He signed and dated question twelve 'G.B.S. 19/9/1949'.

478. Exhibited are questions and answers Nos. 1, 2, 3, 4, 7 and 8.

JOHN SPILLER, 1833–1921

Chemist. Photographic experimenter with Sir William Crookes on the improvement of the waxed paper and the collodion processes. Published with Crookes the first 'dry' collodion preservative process in 1854.

479. SIX-PAGE HOLOGRAPH MANUSCRIPT of a memoir read before the Photographic Society of London, entitled 'Researches on the methods of preserving collodion plates', and dated 14th April 1856.

SIR JOSEPH WILSON SWAN, F.R.S., 1828–1914

Chemist, and inventor of the carbon filament electric light bulb. Introduced the first successful carbon process for printing permanent photographs (1864) (now called 'Autotype').

480. FOUR-PAGE HOLOGRAPH LETTER dated 24th March 1895 to John Spiller.

W. H. FOX TALBOT, F.R.S., 1800–1877

Inventor of the photogenic drawing and calotype paper processes of photography.

481. TWO-PAGE HOLOGRAPH LETTER dated 23rd June 1844 to the editor of the *Literary Gazette*. Talbot

brings to the notice of the editor (W. Jordan) his new work *The Pencil of Nature* (No. 420), of which he says, 'I have met with difficulties innumerable in this first attempt at photographic publication and I therefore hope all imperfections will be candidly allowed for and excused. I have every reason to hope the work will improve greatly as it proceeds and that British talent will come forward and assist the enterprise. The complexity of the art requires a division of labour. One person should invent new processes while another puts in execution those already ascertained, but hitherto I have been the chief operator myself in the different branches of the invention.'

W. H. FOX TALBOT

482. THREE-PAGE HOLOGRAPH LETTER dated 3rd May 1874 to John Spiller declining the office of President of the Photographic Society of London and suggesting the name of Sir Charles Wheatstone.

WALTER BENTLEY WOODBURY, 1834–1885

Photographer and inventor of the Woodburytype process of making permanent photographs (1864).

483. THREE-PAGE HOLOGRAPH LETTER dated 9th December 1882 to John Spiller, about the latest improvements in his process.

APPARATUS

CAMERAS

484. A SCIOPTRIC BALL OR 'OX-EYE', c. 1750.
An ingenious instrument for viewing the scene outside when the whole room is intended to be used as a camera obscura. The first description of it is in Johann Zahn's *Oculus Artificialis Teledioptricus*, 1685 (see No. 460) but the device was probably known before. It consists of a wooden ball confined in a hollow zone of wood, the flat side of which is screwed into a hole in the window shutters. The ball, which can be rotated in all directions, has a cylindrical hole, at each end of which is a lens. The lenses are of different focal length, and by using both together a third focal length is obtained, of shorter focus than either.

485. PORTABLE CAMERA OBSCURA, c. 1780.
Made by W. & S. Jones, Holborn, London. Folds up in to a box, height 5½″, width 11½″, length 15½″; height 28″ when drawn out by rack and pinion. The 'periscope' is fitted with a mirror, and two lenses, each in a separate panel, one for distant and the other for near views. The image thrown on to the drawing board by the periscope is viewed through a large aperture, which is padded for resting the face against. There is also a curtain of green cloth with sleeves through which the hands can manipulate on the drawing board.

486. PORTABLE CAMERA OBSCURA, c. 1810.
Made of mahogany, one box sliding within the other. Width 5½″, length 9½″, height 3½″. It has a simple landscape lens and the box contains a mirror at an angle of 45°, which reflects the image on to a ground glass (as in modern reflex cameras). A hinged lid with side flaps protects the ground glass when the box is closed, and shades the image when drawing.
This model is the direct forerunner of the photographic camera. It is slightly larger but otherwise exactly the same type as that used by W. H. Fox Talbot for drawing in Italy in 1823 and 1824 (now in the Permanent Collection of the Royal Photographic Society). It was early in October 1833, while trying to sketch (rather unsuccessfully) near Bellagio by means of Wollaston's camera lucida, that Fox Talbot was reminded of this previously-used instrument with which he had achieved greater success, and that the idea first occurred to him of trying to find a means of rendering permanent the image made in the camera obscura by some chemical means obviating the laborious work of tracing it.

487. F. H. POWELL'S SINGLE-LENS STEREOSCOPIC CAMERA. 1858.
Registered 27th December 1858, and manufactured by Horne & Thornthwaite, London. It folds up into a box 13″×7″×7″. In this camera the two pictures are taken consecutively on the same plate. After the first picture has been taken on one half of the plate, the whole camera slides along a groove on the top of the box, and the other half of the plate is exposed. The camera movement can be varied laterally to a length of 13″, according to the distance of the object from the lens. Three wooden double slides, the focusing glass, and the lens, are all packed inside the camera box when not in use.

488. F. H. POWELL'S BINOCULAR STEREOSCOPIC CAMERA. 1858.
Registered 27th December 1858, and manufactured by Horne & Thornthwaite, London. It folds up into a box 9½″×6½″×5½″. This is one of the best known stereoscopic cameras of the period, and is much finer in design and construction than No. 487. Having two lenses, both pictures could be taken simultaneously, and with this camera almost instantaneous views were possible. A second pair of lenses of different focal length is provided. Three wooden double slides, the focusing glass and lens panel are all packed inside the camera box when not in use. The lens panel incorporates vertical adjustment for architectural views.

489. EASTMAN ROLLER SLIDE for stripping film 3½″ wide. British Patent 25th November 1884. Exhibited is the improved model patented 5th May 1885. Mahogany box 6½″×4½″×2½″. It had long been the great desideratum of photographers, especially amateurs, to be able to take a large number of photographs consecutively on a roll of sensitised paper. The British were pioneers in this respect. The first suggestion emanated from the Rev.

Calvert Jones, 1853; the first such device being constructed by A. J. Melhuish and J. B. Spencer the following year. Camille Silvy (1867) and Leon Warnerke (1875) followed suit by re-inventing and patenting similar roll holders. Largely owing to their bulkiness and clumsiness, these devices did not find general favour — and how could it have been otherwise considering the enormous picture size with which the mid-Victorians liked to work? Frank Haes, a well-known photographer (1832–1916) relates that in 1855 he used Melhuish's roll holder taking twelve pictures each 12″×15″ on sensitised waxed paper. It was an American, George Eastman, who first brought out a practicable roll film and holder in 1884, and with his mass-production methods fulfilled the demands of millions of amateurs. Even his wooden contraption, which was inserted into the back of the camera like a plate holder, still looks rather primitive!

490. STIRN'S DETECTIVE CAMERA. 1886.
Patented in Great Britain on 27th July 1886. This detective camera, invented by a German, C. P. Stirn, was one of the earliest and most popular of its kind. Of flat, circular shape, 5½″ diameter, the camera was worn underneath the waistcoat, the fixed-focus lens protruding through one of the buttonholes. It took six circular pictures each 1⅛″ diameter on a gelatine dry plate, which could be rotated by a knob protruding through another buttonhole. The instantaneous exposures were made by pulling a string.

491. NEWMAN'S PLATE CHANGING BOX patented 24th June 1886 (improved patent 30th July 1892). 7½″×5½″×2½″. For one dozen 7″×5″ dry plates. The changing box is a plate magazine, filled with twelve plates, each in a separate sheath. After exposure, a fresh plate was manipulated into place by feeling through a soft leather bag on top. An indicator on the back shows the number of the plate in position.

492. KRUGENER'S SHUTTLE MAGAZINE CAMERA. 1888.
Patented 1st February 1888. The novelty of the magazine camera, of which this is the prototype, was that it allowed of a number of plates or flat films (12 or 40 respectively) being carried inside the camera, and being exposed successively by means of an automatic arrangement. This Krugener model carried twelve 9×12 cm. plates. The exposed plate was dropped to the bottom of the camera by means of a lever, and the next plate was ready for use.

493. EASTMAN 'KODAK'. 1888.
The first model of the Kodak, which with its later variants was completely to revolutionise photography. Patented in Great Britain on 9th May 1888. A box camera, 6½″×3½″×3½″, using stripping film on a paper roll on which one hundred pictures could be taken. The photographs were circular, 2½″ diameter. Fitted with a rectilinear fixed-focus lens giving sharp definition of everything beyond 8 feet. (See No. 468.)

494. DRESSER'S HAND CAMERA. 1892.
Made by Henry Crouch, London. This is one of the early hand cameras for dry-plate photography. 9½″×6¾″×4″. The back of the box behind the focusing screen contains storage space for three wooden double slides, quarter-plate size. The camera can be used for either horizontal or vertical pictures, is fitted with built-in view finders for either, has a lens of 5½″ focal length, an iris diaphragm and a primitive clockwork shutter, the speed of which can be varied. The focal length can be altered by a rack and pinion which extends the front part of the camera box, at the same time indicating by a pointer the distance, in feet, of the object. It also has vertical and horizontal movement.

495. EASTMAN 'KODAK' STEREOSCOPIC CAMERA 'HAWK EYE' NO. 4. 1890.
The first hand camera for taking instantaneous stereoscopic views on roll-film. The focusing and shutter systems operate on both lenses simultaneously. Exposures could be varied from one second to 1/100th second.

496. EASTMAN 'KODAK' 'PANORAM' CAMERA NO. 4. c. 1902.
Although quite a number of panoramic cameras were constructed, the first as early as 1845, it was the 'Kodak' 'Panoram' camera introduced in 1900 — of which the makers claimed that a child could use it — which made panoramic photography a popular pastime for a while. The 'Panoram' is a daylight-loading hand camera 10″×5½″×4½″ using flexible film which is bent to a curve. The lens swings round on its nodal point during the (instantaneous) exposure. The 'Panoram' was made in two sizes; No. 4, the larger, took panoramic pictures 12″×3½″.

497. NEWMAN & GUARDIA 3¼″×3¼″ 'STANDARD' HAND CAMERA WITH PLATE CHANGING BOX FOR TWELVE PLATES. c. 1902.
One of the best British-made hand cameras of the period. It is one of the first cameras taking square pictures, and consists of two boxes connected by a bellows extension. Overall dimensions when closed 7½″×4½″×5″. The movement is actuated by rack and pinion. Fitted with a 5″ Ross homocentric lens F 6.3 and iris diaphragm, and an adjustable pneumatic shutter with seven speeds from ½ to 1/100th second.

498. GAUMONT PRESS CAMERA, 1900.
Size (not including lens) 7½″×6½″×4½″. Fitted with a Zeiss Anastigmat 13.6 cm., F.8, iris diaphragm, adjustable pneumatic shutter. Horizontal and vertical movement of lens panel. The back part of the camera, behind the view finder, is fitted with an automatic changing box holding twelve plates 4½″×3½″, with automatic indicator showing the number of the plate in position.

499. 'PETAL' BUTTONHOLE CAMERA. c. 1949.
The smallest workable camera ever constructed. 'Made in occupied Japan'. Circular, 1½″ diameter, ½″ thick, taking six exposures on a disc of panchromatic film ⅝″ diameter, each picture measuring $\frac{1}{10}$″. Can be used for Time and Instantaneous exposures. Fixed view-finder. The camera, which is made of nickel, is attached to the lapel by a

brooch pin which contains an 18″ spring chain to bring the camera to eye-level for photographing. Total weight 70 grams.

STEREOSCOPIC VIEWING INSTRUMENTS

500. BREWSTER'S LENTICULAR STEREOSCOPE. c. 1853. Invented by Sir David Brewster and described by him to the British Association in 1849. The lenticular stereoscope was first commercially produced by the French scientific instrument maker Duboscq and exhibited by him at the Great Exhibition, 1851, after which it won universal favour. It was the 'television' of the Victorians.

501. CLAUDET'S LENTICULAR STEREOSCOPE. 1855. Patented on 8th March 1855. The two eye-tubes, which can be drawn in or out according to the viewer's eyesight, are an improvement on Brewster's construction.

502. CLAUDET'S REVOLVING STEREOSCOPE. 1855. Invented and patented by Claudet on 8th March 1855. Height 18¼″, width 11″, depth 10¼″. A drawing-room adjunct and treated accordingly as an ornamental piece of furniture. The whole woodwork is richly decorated with inlaid work and ornamental figures. Inside the lid of the box, which can be turned up, is a mirror to give greater brightness to the glass slides, which are mounted on an endless band and rotated by means of knobs. This instrument takes approximately 100 slides. Focusing of the eye-pieces is done by means of a rack and pinion.

503. NEGRETTI & ZAMBRA'S STEREOSCOPE. 1859. Patented in December 1859. This instrument is entirely different in construction from Brewster's and Claudet's. It gives a much brighter picture because light is allowed to fall on it from all sides. It folds up into an oblong box.

COLOUR PHOTOGRAPHY

504. IVES'S STEREOSCOPIC KROMSKOP. 1895. Invented by the American Frederick Eugene Ives, the Kromskop is the perfected version of his earlier instrument the Photochromoscope (1892) and was patented in England in 1895. It is the first apparatus for viewing photographs in natural colours combined with the three-dimensional effect of the stereoscope. Three black-and-white glass positives made from separation negatives taken with Ives's stereoscopic colour camera are viewed through a green, a red, and a blue-violet filter arranged in the instrument in step form. A reflecting mirror and a ground glass are provided to give even illumination. The instrument was made by the Photochromoscope Syndicate Ltd., London, who also supplied the 'Kromograms' — the glass positives which unite to give a perfect colour picture.

505. SANGER-SHEPHERD REPEATING BACK. 1900. The repeating back, 4½″×6½″, fits any whole-plate view camera, and was first used for the production of three separation negatives in the Sanger-Shepherd colour process, so named after its originator. It consists of a frame holding three trichromatic filters, blue, green, and red, and a wooden double dark slide taking plates 8″×3″. By means of a lever both plate and filters are moved together. After development the plate is cut into the three separations, from which colour transparencies are obtained by a dye process, for projecting a colour picture in the magic lantern. Alternatively, glass positives could be made and viewed as a colour picture in Ives's single-lens Kromskop.

EARLY CINEMATOGRAPHY

506. A KAMMATOGRAPH MOVIE, 1898, of two boxers, running time 40 seconds. 300 photographs are arranged spirally on a 12″ diameter glass disc with a hole 2½″ diameter in the centre. It was taken, and projected, in a cinematographic apparatus invented by Leo Kamm and patented on 17th March 1898. The disc is given an intermittent rotary motion and also a horizontal displacement, which enables a large number of pictures to be impressed upon it in a spiral form. There was considerable novelty in the mechanism of the Kammatograph, for other cinematograph cameras made use of strips of celluloid film.

LENSES

507. ACHROMATIC LENS, c. 1857, in brass tube, sliding within another tube, actuated by rack and pinion for the purpose of adjusting the focus. f—5″. It is very uncorrected, has no diaphragm or stopping device, is fitted with a focusing screw. Lens diameter 1¾″, overall length 4″.

508. ACHROMATIC LENS, c. 1865, in brass mount. f—11″. Works with Waterhouse stops inserted between the two lens components, a complete set of seven stops being contained in a red morocco case bearing the name of Ross & Co. Lens diameter 2″, overall length 3½″.

509. ACHROMATIC WIDE-ANGLE LENS, c. 1865, probably of French manufacture, in brass mount. f—7½″. Fitted with a rotating diaphragm disc perforated with five apertures of different size from F.15 to F.45. Lens diameter 1½″, overall length 1¾″.

510. PINHOLE LENS, c. 1895. Made by A. Watkins. Size of lens panel 2¾″ diameter. The 'lens' consists of a piece of metal pierced by a tiny hole. Many scientists argued that pinhole photography would give a much truer perspective than optical lenses, being free from their aberrations. It was not until the advent of dry plates that the idea of pinhole photography became a practical proposition, and even then the exposure time in sunshine was approximately 20 minutes.

CLAUDE MIRROR

511. CLAUDE LORRAINE MIRROR, c. 1780. A convex mirror of black glass, 4½″×6½″ oval. Named after the famous French painter who made use of such a glass three centuries ago as an aid in composition. Claude mirrors were extensively used by eighteenth-century painters, and the device

retained its usefulness for Victorian photographers as it shows how a view will look when reduced, and, to some extent, when reproduced in monochrome, for the black glass largely eliminates colour.

SHUTTERS

512. DANCER'S REVOLVING DIAPHRAGM with three apertures of different sizes and lens flap which acts as shutter. Patented by J. B. Dancer on 5th September 1856. The revolving diaphragm is pushed on to the lens like a lens cap. The diameter of this particular one measures 3½″ but the actual lens opening is only ¼″ at full aperture.

513. CADETT'S INSTANTANEOUS VIEW SHUTTER, manufactured by Marion & Co., London, c. 1882. The general introduction of fast dry plates in 1880 necessitated quick-acting shutters (previously, the lens cap was simply removed and replaced), and Cadett was one of the first to fill this need. Though this instrument is very clumsy and heavy — it is made of iron, measures 5½″ circle and is screwed on to the outside of the lens — it can be set for twelve different speeds, which are produced by a revolving disc which is wound up and released by a pneumatic bulb. There are also two levers for time exposure.

514. LANCASTER'S REVOLVING DISC SHUTTER. Patented 1st May 1885. Metal disc 2⅜″ diameter was screwed on to the exterior of the lens (lens diameter 1½″). A second metal disc, which revolves by means of elastic, is released, and thus acts as shutter. The speed is adjustable by tightening the rubber band.

515. NEWMAN'S PNEUMATIC GUILLOTINE-SHUTTER for use in front of the lens. Patented on 27th May 1886 and made by the London Stereoscopic Company. Marked for eight different exposures ranging from one second to 1/100th second. The exposures are marked round a tube containing compressed air and when the shutter is wound up a metal blade drops according to the speed set on the regulating valve.

516. WALLIS'S ROLLER BLIND SHUTTER, patented 24th October 1899. The rosewood box measuring 4½″×3½″, is screwed on to the outside of the lens. The blind is wound up and when released is rewound upon a spring roller. It is marked with five speeds, from $\frac{1}{15}$th to $\frac{1}{60}$th second.

LIGHT METERS

517. BING'S ACTINOGRAPH OR PHOTOMETER, patented in September 1866. A box ¾″×1½″×3″ with a glass lid divided into squares of equal size which are numbered from left to right with increasing numbers in the ratio in which the transparency of the glass decreases. For measuring the light intensity, a strip of sensitive paper is inserted underneath the figures through the hinged bottom containing a pressure frame which keeps the sensitive paper pressed against the numbers.

518. WOODBURY'S PHOTOMETER. 1880. Rather in the form of a watch, measuring 1¼″ diameter circle, ¾″ thick. Under a protective glass is a disc with various shades of brown, and the sensitive paper to be matched is inserted through a slot. It was manufactured by Sciopticon Co., London, whose name appears on the lid.

519. WATKINS' EXPOSURE METER, patented 27th January 1890. Manufactured by R. Fuld & Co., Birmingham. This is a brass tube with a roll of sensitive paper inside. According to the length of time it takes to darken and to match a given colour, the exposure can be calculated by means of an elaborate system of six movable rings arranged round the brass tube, representing the actinic force of the light, the sensitiveness of the plate, the colour of the object and its distance from the lens, and the relation of the diaphragm of the lens to its focal length.

520. SCOTT'S EXPOSURE METER, patented 4th October 1892, consisting of five concentric aluminium rings (diameter of the largest 2¼″) with figures from which the exposure can be calculated on the principle of the slide-rule. Manufactured by Britannia Works Co.

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